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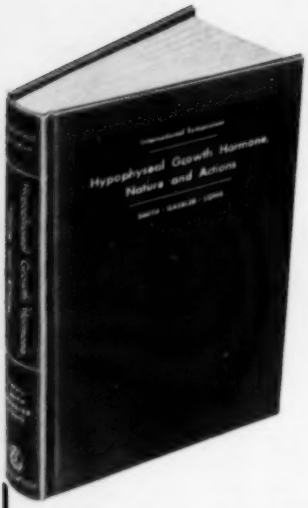

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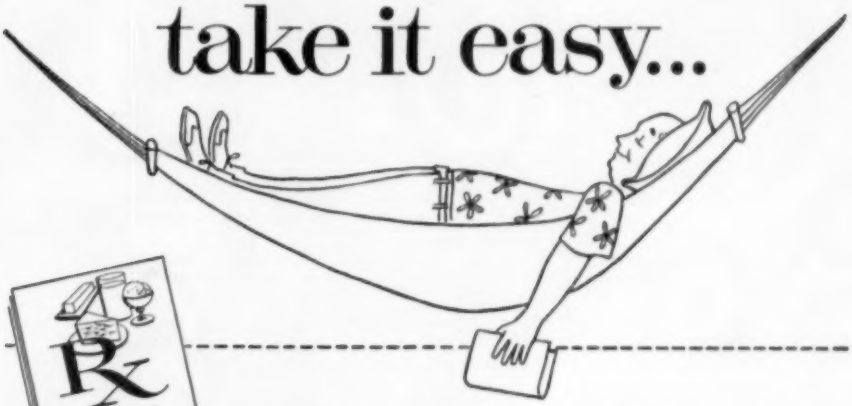

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Teaching Institute on Anatomy and Anthropology—October 19-22; Swampscott, Mass. (New Ocean House). (Attendance by invitation only).

American College of Angiology — June 4; Brighton Hotel, Atlantic City, N. J.

American College Public Relations Association—June 30, July 1 and 2; Chicago.

American Diabetes Association—June 4-5; Chalfonte-Haddon Hall, Atlantic City, N. J.

American Hospital Association, Annual Convention—September 19-22; Traymore Hotel, Atlantic City.

American Medical Association, Annual Meeting—June 6-10; Atlantic City, N. J.

American Medical Women's Association—June 2-5; Hotel Dennis, Atlantic City, N. J.

American Neurological Association—June 13-15; Palmer House, Chicago.

American Ophthalmological Society—June 2-4; Greenbrier Hotel, White Sulphur Springs, W. Va.

American Pediatric Society — June 13-17; Chateau Frontenac, Quebec, Canada.

British Medical Association, Representative Meeting—June 1-4; London, England.

Canadian and British Medical Associations, Joint Meeting—June 20-22, Toronto, Canada.

Congress of the International Diabetes Federation—July 4-8; Cambridge, England.

Eighth International Conference of Social Work —August 5-10, 1956; Munich, Germany.

European Congress on Rheumatism—June 13-17; Scheveningen, The Hague, Netherlands.

International Anatomical Congress—July 25-30; Paris, France.

International Congress of Biochemistry—August 1-6; Brussels, Belgium.

International Congress of Plastic Surgery—August 1-4; Stockholm, Sweden.

International Medical Congress — September 1-4; Verona, Italy.

Pan American Congress of Ophthalmology—January 9-14, 1956; Santiago, Chile.

Pan American Congress on Rheumatic Disease —August 14-20; Rio de Janeiro and Sao Paulo, Brazil.

World Congress of Anesthesiologists—September 5-10; Scheveningen, Netherlands.

World Medical Association—September 20-26; Vienna, Austria.

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History Taking and Interviewing Technique

GEORGE H. CARTER

THE INTEGRATION of psychiatry and medicine in the teaching of medical students at all levels has been dealt with from several points of view in the recent literature.[1-14] Both broad concepts and specific teaching techniques have been presented with increasing emphasis on the total social and biological person as patient. The application of such concepts in teaching has likewise taken a number of forms.

At Boston University School of Medicine a second-year course in interviewing technique comprising 16 hours of clinical small group instruction by members of the department of psychiatry is the initial focus for the clinical application of such concepts. In the third year the family care program allows for a continuation of the process by a psychiatrist attached to the department of preventive medicine which administers the program.

The second and third-year medical student, as he begins his contacts with patients, is beset by a number of problems, which often enough give him the feeling that he is swimming beyond his depth. He usually isn't too familiar with the unpredictable currents of a doctor-patient relationship. On the one hand, he needs a foothold so that he can proceed with the important job of history-taking and diagnosis without being flooded by his concern about how little he knows and what the patients think of him. At the same time, in a more positive way, he needs certain guideposts to help him choose the safest channel toward his goal.

Interviewing is essentially a problem in communication between two individuals with the specific goal (in medicine) of acquiring information useful in the treatment of a patient. For purposes of clarification, it might be well to separate certain fundamental aspects and think about them in more detail. Certainly three of them are *observing* the patient, *listening* to the patient and *eliciting* more information from the patient.

The importance of observation does not need emphasis, nonetheless, in any branch of science the process involves at least two steps—a perception and the "integration" of the perception. In observing behavior, one perceives a smile or a blush, and *automatically integrates* this with previous observations to recognize that the observed person is "amused" or "embarrassed." But the smile may mean something else. Some people smile when they are afraid and blush when they are angry, so that the observations of behavior present the same possibilities for differential diagnosis as do the observations of anatomical variations.

Dr. Carter is assistant professor of mental health in the department of preventive medicine at Boston University School of Medicine.

The situation in relation to *listening* to the patient is the same. A student "hears" the same thing as the cardiologist when listening to a rheumatic heart, but skill in isolating, analyzing and reintegrating the sounds into an inferred mitral stenosis is a matter of practice and training.

Likewise, the student may occasionally hear the patient say he is feeling fine and by the integration of other things known about the patient may infer that his statement doesn't mean that at all; that the patient is just frightened and wants to leave the hospital before the studies are completed. Such inferences seem to come more naturally to some than to others, but they are an essential part of adequate communication with the patient.

These two aspects of the interviewing process, observing and listening, are in one sense passive, though accompanied by active integrative mental efforts as noted above. The *eliciting* of information from the patient is, of course, a more active process. It is essentially the problem of helping the patient to communicate what the interviewer, as physician, wants to know for diagnostic and therapeutic purposes.

The familiar formal divisions of history taking (present illness, past history, social, marital and family history, etc.) are important and may be vital to adequate treatment. Nonetheless, the divisions are primarily ways of organizing one's thinking about a patient so it can be more easily communicated to others. The patient does not know this conceptual framework, of course, nor does he want to be thought of as only a "case" fitting into such a framework. So, as one learns, one adapts this framework to the situation, mostly following the patient's leads in the history taking process, but all the time trying to keep in mind a number of things:

1. What does the picture given so far indicate?
2. What further information is needed to clarify this possibility?
3. How to make it easier for the patient to give this material, i.e., with the least possible discomfort to him?
4. What information is this patient giving, perhaps unknowingly, that helps to clarify his illness and his way of dealing with it?
5. How is the patient reacting to the interviewer and his approach?
6. Should the approach be modified so as to make it easier for the patient to give information needed?

The physician tries to keep in mind some of these things. A great many thoughts about how others are reacting and how one should modify one's behavior are stock-in-trade with any human being, so to say that one has to keep these things in mind is an overstatement. Still, in the process of eliciting (as with observing) there is this constant organizing of one's thoughts and modifying one's approach in the light of information that is coming in. In the particular interviewing situation between a doctor and a patient, the goals differ from those in other social situations to a considerable extent, and this has an important bearing on the behavior of both participants.

Three Goals

Arbitrarily we might say there are three important goals: 1. Establishing the initial relationship with the patient. 2. Acquiring sufficient information to be able to diagnose and treat. 3. Keeping the patient as comfortable as is consistent with adequate diagnosis and treatment.

Establishing a good relationship

with the patient. This is first, and for a good reason. Getting the patient to cooperate in all that is necessary for making a diagnosis and instituting treatment depends on how the patient feels about the physician.

Fortunately, the cards are almost always stacked in the physician's favor in this situation, since he is looked upon as a repository of knowledge and skill, as well as an individual with kindly feelings and a strong wish to help. Such attitudes on the part of the patient are happily not misplaced, since most doctors and medical students know a great deal about human ills and are anxious to relieve them. So the doctor starts with an advantage. Again, in our society where talking about gastrointestinal and sexual functions, for example, is socially taboo, or where some people are ashamed to admit they are "scared," the physician is one person with whom such subjects and feelings can traditionally be discussed with less embarrassment or loss of face. In addition, it should not be disregarded that physicians, like other people, attain considerable skill in the art of making relationships with others in the first 20 years of life before coming to medical school. So, in handling patients, obviously they do not throw all of this out of the window. Each one differs personality-wise, and can capitalize on his previous experiences in dealing with people, as he develops a more skilled approach to his goals. Indeed, the learning of interviewing technique involves an awareness of how we can take advantage of such assets.

We start happily then, with the patient expecting and usually finding certain "positive" things in the doctor, his knowledge, his skill, his traditional role as noncritical advisor, his wish to be helpful, his natural ability to "relate" to others. In addition we find other fortunate attitudes on the patient's part. First of all he comes to us because something is bothering him, because he feels uncomfortable in some way or is worried about his health. At this juncture, he is usually more concerned about such things than about anything else. This is fortunate, especially when we are learning to practice medicine, because it means the patient is thinking, "How serious is this?" and "Am I going to get over it?" or "How long will this go on?" rather than "What's wrong with the young doctor who isn't quite sure what he wants to ask next?" Thus, the patient's concern about himself adds to the physician's desirability. So far then, patient and doctor are working together. What else can the physician do in the interests of a good relationship?

Most medical students learn early that they are supposed to "listen." It is true that in the establishment of a good relationship, listening is vital. First of all, the patient expects the doctor to listen to the story of his complaints and is disappointed if this expectation is not fulfilled. But "listening" is not just sitting there and letting information go in one ear and out the other. Listening is no more completely passive in this situation that it is in listening to a friend tell a good story. One is quite naturally alert, and one's demeanor indicates interest and attention. When "just listening," one will want to ask "What happened next?" or if one does not understand, to ask what was meant. The dividing line between listening attentively and eliciting information is not a sharp one. The important thing is to be "here," *with* the patient.

Further, from listening, one may get a notion as to where the patient is in his feelings. Sometimes, it is

quite obvious. The patient is openly expressing his worries about what is going to happen to him, for example. At other times, one has rather to listen between the sentences and consider what else the patient is saying besides what he is putting into words. Actually, not only the establishment of a good initial relationship, but also the other goals of making a diagnosis and keeping the patient comfortable depend frequently on just such awareness on the doctor's part. But if one were to ask patients which doctors they most prefer one would find that they often pick those who have a peculiarly human way of being able to hit at the heart of what is of greatest concern to the patient and to relieve it, while at the same time carrying on all the other aims and functions of medicine. Such a doctor "listens" and "understands" in a way which may be more important in the patient's eyes than the making of a correct diagnosis.

Patients' Fears

Now suppose, for example, you are dealing with an elderly woman who has a moderately severe degree of congestive failure, and she mentions, two or three times, people she's known who have had heart disease and died of it. It doesn't take much imagination to guess that she herself has some concern about dying and that she is asking what her chances are. She wants *specific* reassurance. An important part of the interview is to give it to her. The technique of doing it may differ depending on how willing she is to talk directly about her indirectly expressed concern.

A patient with asthma, who has been extraordinarily ill, talks a good deal about what a capable fellow he was before he got sick—how strong he was, how, while working as a mechanic, he could lift the axle of a truck. One doesn't have to guess that it is unusually important to this fellow to be strong, and that in all probability his incapacitating illness is especially disturbing to him on this account. The knowledge allows the physician to evaluate the patient's self-respect and mitigate the humiliation of his incapacitation.

The same basic principles apply to the other aspects of interviewing procedure, i.e., observing the patient and eliciting further information. In both one can get a kind of knowledge of the patient and deal with him in such a way that his confidence is gained and maintained. Essentially, this involves, again, understanding what the patient is feeling and making reasonable use of such understanding in the handling of his illness.

The second major aim of medical interviewing, and in many respects the fundamental aim, is to acquire enough information about the patient and his symptoms to be able to make a diagnosis, i.e., a working hypothesis about the underlying pathology. It sounds simple enough. You listen to the patient's story; you ask him further to describe his symptoms; you ask a great number of related pertinent questions; you do a bit of thinking about it, a bit of integrating of what the patient, the physical examination and the laboratory technician tell you and you have a working hypothesis. But when you are confronted with a patient who does not talk easily or a patient who cannot remember, or who gives inconsistent stories each time you talk to him, or a patient who won't *stop* talking about his boss or his spouse when you need to know when he first started losing weight, it complicates things. There is an art in knowing

how firm to be, how strongly to urge someone to talk, how and when, to limit gracefully the apparent ramblings of a patient and to get him to concentrate on a specific problem more obviously connected with the current disease.

But even before considering such problems, there are even simpler things which are worth remarking. It is common knowledge that in getting a history, one inquires in great detail about any symptom: its nature, intensity, variability, frequency, duration, what brought it on, what relieves it, etc. It is our experience that one of the hardest things to acquire is a thoroughness in gathering such information. The difficulty has several sources. One is a lack of adequate knowledge on the part of the beginning interviewer about the disease picture. He has not had the experience to conjure up an adequate mental picture of the "living" disease.

Since history taking is a time-consuming procedure and involves asking a great many questions, efficiency is important. In the interests of efficiency as well as for reasons previously noted, the patient is helped to tell his story first. He is the only one who knows "what's up" at the start and unless encouraged, the *patient's* problem may be missed completely. After this, the elaborations begin. The physician has to ask direct questions, has to take the lead and use some initiative to get an adequate history. Patients respond in different ways to this procedure. Some patients have already "made a diagnosis" and orient their answers along the lines of their own preconceived ideas. Some either directly or indirectly put the physician in the position of magician who is supposed to know the answers without the patient's help. Some find it difficult to give much information unless they know *exactly* what the doctor is asking. They are afraid they are going to mislead him in some way into making a mistake. Some are "suggestible" and one has to be careful not to supply in the question the answer one is looking for. To be sure, the great bulk of patients are cooperative and anxious to help and give a reasonably clear story, but even so, it takes some skill to get adequate and "unbiased" information. The aim then is to allow the physician's preconceptions, and the patient's, to interfere as little as possible with the gathering of information.

This does not mean that very specific questions should not be asked, but such questions are couched in general terms first. If the patient does not tell about the effect of exercise, eating and emotion on his pain, in answer to general questions, one still wants to know and will ask directly. The question will be preferably whether eating and exercise have *any* effect upon the pain, rather than "Does eating or exercise make the pain worse?"

Sometimes, when the patient does begin his story spontaneously, he may shortly reach a stopping point, and wait for a question to be asked. The interviewer should seek a clear picture of the symptoms.

The technique of asking questions of a general, nonleading nature should not be aimed at getting the patient to do the physician's thinking for him, but at getting quite specific unbiased information.

The Patient's Meaning

Sometimes, when the physician wants to proceed from the general picture to the specific details, the patient may be going in the other direction. For example, a highly intelli-

gent patient says he had rheumatic fever as a child or that he had fainting spells, or a nervous breakdown or malaria. Since the patient is intelligent, one might be tempted (students are) to leave it at that. But one cannot accept the patient's diagnosis even if it is ancient history and doesn't seem important. What *he* means by "malaria" or "nervous breakdown" is what is important: whether this was the diagnosis of another doctor, what the symptoms were, how long they lasted, how incapacitating they were, what sort of treatment was given, whether there were any permanent sequellae (so far you are asking the *facts)* and whether the patient felt it had done anything to him. Only with such information can one make an adequate assessment of the patient's "malaria" or "nervous breakdown."

This sort of difficulty in getting an adequate picture is not limited to the patient's use or misuse of a diagnostic term but arises often, and in much of the communication between doctor and patient. Does the physician ever assume that he knows what the patient is talking about while in reality he knows nothing of the kind? Indeed and unfortunately he does. The patient is rarely a trained observer, hence, medical historical facts need to be drawn out of him with some subtlety and care.

The patient has to be met on his own ground; his language has to be understood. If his answers are vague, one gets him to be as specific as one thinks him capable of being. If he objects, his cooperation can be elicited with a brief explanation that the information is necessary in the interest of taking care of him properly. If, as so often happens, he objects that he has already given this information to another doctor he can be shown that a competent physician does not base his judgment on treatment on what somebody else has said. The doctor does not have to be belligerent about this, even though occasionally the patient is. It is understandable that the patient does not want to present the same information twice any more than he wants to have his painful belly palpated by more than one physician, but frequently both procedures are necessary, and usually the patient can see this, and will cooperate when it is briefly explained. The doctor is a student, and hesitant on this account. He should remember that it is not a rarity for a diagnosis to be made, or an important aspect of handling the patient to be clarified, by something that the patient communicates to a student. It is the student's responsibility, like the physician's, to get as clear a picture of the situation as he can.

In summary then, some of the things one has to think about in getting a history is giving the patient a chance to tell his story first; making inquiries with terms which give the patient no clue as to what the interviewer thinks the answer may be; not allowing the patient to get away with using diagnostic terms unless it is clear what facts and what ideas of the patient the terms represent; pursuing a symptom until one knows what the patient means and has some idea of what the symptom means to the patient thinking about the information as it is given; and asking further questions that will fill in the gaps.

Obviously it is not easy to do all these things at once, just as it is not easy to do a complete physical examination in a well-organized fashion the first time you try. With practice, a good many of these things become almost automatic.

Now, we have discussed the kind

of information we want and how to get it. Actually, you will observe considerable variation in approach, from interviewer to interviewer. Some doctors are relatively silent and seem to get the patient to give an adequate picture of the illness without much effort. Some repeatedly recapitulate what the patient has said and thereby help him to present a better organized picture. Some are intense, others quite matter of fact. Some smile and laugh, others are quite serious. None of these variations or a number of others is especially good or bad. Effectiveness depends on the personality of the patient, the personality of the doctor and the appropriateness of its use in the particular situation.

The same interviewer may handle different patients in quite different ways. He has to be encouraging or actively complimentary to children of a certain age to make them feel at ease. He has to be firm with evasive patients, gentle with sensitive patients, sometimes quite active in suggesting possibilities to inarticulate patients. There is no absolute rule to cover all situations, except that the physician must be flexible, must fit his approach to the patient, whose mood and feelings may vary from day to day, even from moment to moment. Ideally, the physician intuitively, naturally, almost automatically fits his mood to the patient's, as he would with a friend or any human being; but this is not to say that he cannot quite consciously use certain devices to keep the patient talking, to continue the flow of information. The aim is to focus the patient's attention and talk on what seems at the moment important, and at the same time influence as little as possible the content of his information. This is necessary, or at the other extreme, it may require repetition of something the patient has said to get him to elaborate sufficiently.

Patients' Comfort

The third major goal that we spoke of was that of keeping the patient as comfortable as is consistent with making a proper diagnosis and giving adequate treatment. Obviously, some of the patient's comfort centers around our first goal of establishing a good doctor-patient relationship. We included under that heading some remarks about the recognition of the patient's immediate anxieties about his symptoms and what they mean; there is usually concern about what the doctor is going to do, and whether it is going to be painful. These concerns are "superficial" only in the sense that they are immediate and conscious in the patient's thoughts. It does not mean they are unimportant, nor to be brushed aside. Sometimes students ask whether an interview should be a psychiatric one or a medical one. What they sometimes are asking is how much of their energies should be devoted to getting an adequate picture of the symptoms, and how much to understanding and dealing with the patient's immediate concerns and worries. Of course, there is no absolute answer to the question; it depends on the patient and the situation.

In general, one first tries to get a picture of all that contributes to (and is produced by) the patient's immediate symptoms; then, a larger picture of the general health of the individual and some idea about his ways of dealing with health and illness. Observations about his handling of the immediate interview situation, as well as some understanding of his handling of life situations contribute to the total picture. For example, consider the pa-

tient who in the course of history taking makes it quite plain that he has been shabbily treated by his family, his friends and others, but who at the same time sees nothing but good in all these people; he cannot be critical of others. One can expect him to find it difficult to let the physician know if his prescription hasn't helped. Indeed, occasionally such a patient will not come back because of his fear that the doctor will be critical of him for not getting better! Obviously, an awareness of such a pattern of behavior allows a better evaluation of the patient's reactions to his illness and treatment. At the same time, it enables the physician to keep the patient more comfortable about what is expected of him.

Actually, there are a whole series of situations in which one has to deal quite directly with things disturbing to the patient, in the interests ultimately of making him less anxious, even though at the time he may *appear* to be more so. Suppose, for example, that in the middle of an interview with a 52-year old man recently admitted to the hospital for "fainting episodes," the patient begins to cry, gets up and leaves the room. He comes back after regaining his self-control. At this point, the reason for his being so upset is not clear. The doctor wants to keep the patient "comfortable," and does not ask about it for fear that the patient will become upset again. He gets the rest of the history, gives a physical examination and eventually reaches some diagnosis. Under these circumstances, the patient continues to have the potentiality of being upset about the same thing that upset him in the interview. Nothing has been done to help him there.

Fortunately, somebody else has interviewed the patient and the same situation has arisen. The other physician *immediately* and sympathetically asks the patient what disturbs him, and finds that two major concerns underlie the patient's reaction. One, that he will lose his job, and two, that his fainting episodes represent an impending insanity. On the basis of the information that comes from the patient, the second physician is able to tell him that insanity is not a question here, and that there is every likelihood that the patient's fainting episodes do not represent any serious disease and should not interfere with the patient's work. The second physician, far from making the patient more uncomfortable by bringing up the disturbing problem, was able to relieve certain anxieties on the part of the patient which were quite specific and were based upon ignorance and misunderstanding.

Many patients show, often in disguised form, concern about death, cancer, disabling chronic illness, loss of job, social censure, poor heredity, etc. In general, the avoidance by the physician of such concerns does nothing to relieve them, and in fact not infrequently contributes to the patient's feeling that he has something so bad or potentially so serious that the doctor is not going to talk about it. If one knows that a patient is preoccupied with a specific fear, even though the fear may eventually be realized, the patient will be less afraid if he feels that the *physician* is not afraid to discuss it. In all likelihood, it will give him more strength to face reality. One aims in such a situation at decreasing the patient's concern; the rule is that one need not hesitate to bring up any concern of the patient's that one knows as a conscious concern. The way one brings it up and what one says about the concern is another matter, but as long as the patient is consciously worried about something, one can

ask the patient more about it without doing any damage.

We have already discussed the elderly woman with heart disease who talked about her dead friends with heart disease. She certainly fears that she may die, whether she is willing openly to face and discuss her fear or not. The physician should not be afraid to deal with such a fear, and in as comforting a way as possible. He asks the patient, gently, whether, since she thinks of her friends dying, she does not have some such concerns herself. He asks this, he approaches the question without fear whether he feels she is nearing death or not. How she answers this question is not so important. If she is doing poorly, he points out the reality of the ups and downs of her illness and dwells on his expectation that she will get better; he lets her know that others have been as sick as she and gotten well. In short, he approaches the whole situation, not with a loud and robust confidence that brushes aside all unpleasant possibilities, but with a willingness to meet the patient on disturbing ground and present in a quiet, confident, straightforward, sympathetic manner the brightest side of the picture. In such a way he sometimes does more for his patient than many medications. Hope springs eternal. Every patient, every human being, somewhere has a strong wish to be well and a latent optimism, however he may *seem* to view a situation. The resurgence of the hopeful outlook stimulated by the physician's attitude has in itself a therapeutic effect.

Physician's Honesty

Now, some will object that the physician has been dishonest with the patient if he hasn't told him *all* the possibilities, if he has not emphasized his greatest concern. But no, he is not more dishonest than the man who speaks pleasantly to, let us say, an irate and inconsiderate boss. It is in the patient's interest and the physician's to handle it thus. Others object to this handling on the grounds that when the patient goes into the hospital, and the diagnosis is more serious that the doctor had indicated in the office, the patient will find out, and think the physician a fool for not making the correct diagnosis at first. It is a possibility, but not a likely one. Usually the patient will be grateful that the doctor had the good sense to hospitalize him when it was indicated. Occasionally a patient does get sour about such a thing, but he may well be blaming other people to avoid dealing with his own concern, and often enough this is a life pattern for him.

But consider also in this patient the other possibility, that the studies reveal no serious disease. Often then the patient will be grateful for the physician's thoroughness, relieved that he hadn't anything to worry about. Had the doctor alarmed him unnecessarily with his own concerns, it could not have helped him at all and might have gained him the reputation of being an "alarmist." So in general, it makes sense to present the most hopeful of possibilities, not to lay it on with a trowel insincerely, but honestly to present the bright side of things, even when the probabilities are most grave.

Uncooperative Patient

We have been thinking in terms of a doctor and a cooperative patient working together towards the common goal of diagnosis and treatment.

This is the most common situation, but any physician knows that some patients are difficult to handle, and for a variety of reasons. Some are unpleasantly and openly hostile—skeptical of the doctor's ability, threatening to go to another doctor, emphasizing the mistakes the doctor has made, sometimes bluntly and sometimes quite subtly. Doctors don't like such patients and are sometimes glad enough when they move on to another physician. But such a patient is also a kind of challenge. His attitude is evidence of his being disturbed, uncomfortable in a sense. Perhaps the major difficulty in properly handling him is that the physician allows the patient to upset him. He gets angry and irritated and loses his necessary equanimity and under these circumstances therapeutic goals are lost. Imagine a patient with, let us say, a chronic infection of the external ear. He has seen many doctors, had many medications, but only once has he had much relief. He talks immediately about the doctor who once made his ear better and how he did it. Since then the same medication has produced indifferent results. The somewhat deprecatory tone of his voice suggests that no one else can help him, that only the doctor who helped before would know what to do in this situation (and, of course, the other doctor has gone into the service or moved to another town!) Such a patient puts the physician on the spot, and as it happens, nothing the physician prescribes is immediately effective in relieving his symptoms. The patient says, "I told you so," as he angrily points out that his ear is no better.

That this patient starts off with a barrage of disparagement is important. Obviously, the attack is not solely because of anything the doctor has done or failed to do, so it must be a part of the patient's general manner of dealing with people. Sure enough, the job history and school history reveal a certain instability, an inability to tolerate anyone in an authoritative position. The patient explains his job changes on the basis of the boss's being too nasty tempered, not realizing that he has often provoked it. One doesn't interpret all this to the patient by any means, but if the doctor is aware that this antagonism and this devaluation of others is a long-standing pattern, he can then more easily accept it without loss of objectivity, and still try to deal with the patient's symptoms with self-assurance, and the patient will be more comfortable too.

Indeed, such a situation is an important lesson; it makes the physician aware that he is vulnerable where he need not be, and when a similar situation arises, he perhaps thinks twice before being upset again by the patient's irrational criticisms.

On the other hand, when the physician *has* made a mistake and the patient points this out, it is well not to play God, but to admit that such is the case and apologize, and if it is appropriate, explain the error. Nothing is lost by such honesty and the patient's confidence and respect are gained.

Now, another difficult patient to handle is the "overtalkative" one who rambles on about many things, or many symptoms, and never reaches a point where one complaint ends and a new one doesn't begin. Here, the physician has to sift out of a mass of information that which seems most pressing at the moment, and then pursue that with avidity until satisfied that the picture is a clear one. This patient may have complaints about eyes, teeth, heart,

lungs, G.I. tract (mouth, stomach, bowels and rectum), urinary tract, etc. Every physician has met him and been at a loss to know in the interview what was worthy of his immediate attention and what was not. The physical examination usually does not solve such a problem nor do the "studies" that have to be done. The physician does not want to let himself be overwhelmed so that he feels like "chucking" the whole thing; but rather to observe, listen, elicit further information,—turning his energy *doggedly* to one area at a time, bringing the patient back to his G.I. symptoms, or whatever, again and again until the physician is satisfied that he has as clear a picture as he can get. It may take several sessions, but if a definite amount of time is allotted for dealing with such a patient and the schedule is adhered to and if the patient knows that it will be, such a situation can be managed without much difficulty. Again the patient feels reassured and more comfortable when things are managed this way.

Often such patients have little or nothing in the way of physical signs, but one has to make sure of that. Ultimately, when one *is* sure—that is, when the "organic" difficulties have been separated from the others and the other symptoms are "understood"—one can relieve anxiety about symptoms, and the patient then becomes freer, and may return to see the doctor with increasing ability to recognize and deal with, let us say, a depression, from which some of the symptoms stem. In this sort of interviewing situation, the physician has to "run the show" and not allow the patient to wander in such a way that their time is unprofitably spent. It is not hard to be quite sympathetic and at the same time firm with this sort of patient if one knows what one wants.

The delicate problem of making it easy for the patient to talk about embarrassing topics, whether it has to do with sexual thoughts and behavior, domestic conflict, unreasonable fears, delinquent acts, socially unacceptable impulses, gastrointestinal functions or whatever, is solved by the doctor's being able to communicate to the patient that the doctor can hear and discuss such things without discomfort. The doctor has to avoid frightening the patient into silence by approaching the problem too boldly or by approaching it so hesitantly that the patient feels it should not be mentioned. When the doctor senses the patient's reluctance, remarks such as "Is there something else you have on your mind?" or "You find that difficult to talk about?" are trial balloons which help him to gauge the patient's response, the degree of embarrassment and how the patient handles it. At the same time it is an encouragement to the patient to feel free to talk.

Here, as in so many other situations, the doctor "respects the patient's defenses." This means then that if a question is gently posed, and the patient reacts with some obvious disturbance as an unusually hasty or vehement denial, signs of discomfort such as silence, or increased restlessness, one knows immediately that one has touched on a sensitive point, and one is then at the same time more interested because it is an area where one may be able to be helpful, and more careful in exploring further because one wants still to keep the patient as comfortable as is consistent with adequate treatment.

Summary

In summary then, the goals that are a part of all medical history taking, establishing rapport with the patient, getting an adequate history and keeping the patient as comfortable as possible are essentially a problem in the facilitation of interpersonal communication. Variations in interviewing technique and history taking necessarily depend on the doctor's personality, the patient's personality and all factors operating in and upon these two individuals at any given moment. Nonetheless, certain specific general aspects of technique can be effectively taught in a clinical situation. A theoretical outline and some practical examples are presented.

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Should the Examination Serve as a Learning Exercise?

WILLIAM B. WARTMAN

FOR THE PAST 10 days my colleagues and I have lived and talked in this stately pleasure dome of Berry Khan. In my spare time, as relaxation from the rigors of mental and corporal catharsis, I have read some of the poems of Alexander Pope and in the opening lines of his "Essay on Criticism," I have found a text for the subject of my report to you:

> "Tis with our judgments as our watches, none go just alike, yet each believes his own."

I find myself beset with many problems concerning examinations. I find some support and encouragement in the opinion that was frequently expressed at the Teaching Institute that correlation should take place in the mind of the student. So I shall tell you about some of the problems and let you do the work of correlation. What is good for teachers is good for deans—and for fourth year Harvard medical students.

I should like to set before you, rather at random, a few thoughts, which are the outcome of my own experience with giving examinations and of the discussions at the Institute meetings. Frequently one hears the comment that the essay type of examination tests the students' ability to organize his knowledge and to write English. "Nature's chief masterpiece is writing well." The implication is made that if he takes enough of these examinations his defects will be corrected, but does the student write a better paper as a senior than he did as a freshman? From his point of view, why should he pay attention to such matters when more important considerations of the examination press upon him? I wonder if the examination does not merely reveal the fault and only delude us into believing that we are correcting it.

I, myself, am inclined to the belief that a number of medical students are capable of writing good English and of expressing themselves effectively, provided we give them the proper opportunity to do so. My belief is based on two personal experiences. As part of the second-year course in pathology, our students are asked to write a thesis based on a review of the literature on an assigned topic or on one of their own choosing. Many of these are well organized and interestingly written in clear, simple English. Year after year we publish two or three of the best of them in the *Quarterly Bulletin* of Northwestern University Medical School and I believe you would find the reading of them profitable. Likewise, as a part of the experimental course in pathology, the stu-

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Dr. Wartman is Morrison professor of pathology, Northwestern University Medical School. This article is adapted from a paper given at the first session of the 65th Annual Meeting of the AAMC at French Lick. Dr. Wartman was one of the participants in the Teaching Institute on Pathology, Microbiology, Immunology and Genetics held the previous week. The report of the Institute will be published as a supplement to the September issue of this Journal.

dents present to the class short summaries of their experiments. We of the staff have often remarked that these presentations are the equal of, and better than some of the papers, given at national scientific meetings.

Proper Examinations

I have told you about this because it illustrates a certain principle in the use of examinations—that we must first know what we wish to measure, and that secondly that we must design the examination properly so that we get the necessary information. Only after we have done these things can we evaluate the results of the examination.

There are many things that we try to measure either in whole or in part with examinations, but strangely enough we use relatively few techniques to satisfy our diverse needs. Is there not a field here for profitable investigation? Let me illustrate my point. In medicine we often have need objectively to evaluate a man's comprehension of practical laboratory or clinical work. Can we prepare an examination that will test a student's ability to handle laboratory problems or properly to study a patient on the ward? Certain newly developed tests give promise of partly solving this problem.* In these tests the student is, for example, given a summary of the clinical history and physical examination of a patient, and a card index file in which are contained cards with the answers to the laboratory findings. The student then decides which laboratory tests he wishes to use and pulls the appropriate card from the file and places it on a spindle. He proceeds in this fashion until he has worked up the case to his satisfaction and arrived at a diagnosis. He is graded not only on the diagnosis, but also on which tests he has used and the order in which he has used them, thus giving a better estimate of his practical knowledge. We have designed and used similar tests, with considerable success, for the practical part of the pathology course.

Another example concerns the need for testing specialists as well as students. Is the same test suitable for both groups? Are there certain types of questions or arrangements of questions suitable for specialists' examinations and other types and arrangements suitable for students? What would be the difference between such questions? Last year the members of the American Board of Pathology decided to set up an experiment to test this proposition. We decided to give students a specialist examination and specialists a student examination. Accordingly, we gave the second-year students in pathology at Washington University, the University of Pittsburgh and Northwestern University a specialist's examination. At the same time we gave a student examination to Board candidates. An analysis of the results in the two groups is under way and we hope that the results will indicate better ways than we now have of constructing examinations for these different purposes.

One common criticism of examinations is to the effect that they unduly emphasize grades. The Teaching Institute was almost unanimously of the opinion that a simple method of grading such as pass, fail and honors should be used. Nevertheless, it is a fact that people outside the medical schools frequently use grades as the chief basis for appointments to internships and other desirable posi-

*This test is described in more detail by J. T. Cowles, "Current Trends in Examination Procedures," *J.A.M.A.* 155:1383, 1954.

tions. But is there not confusion here between a man's examination grades and an evaluation of his real achievement in medical school? We may tell the chairman of a hospital internship committee that a certain student had an overall grade of 85. But does that grade have any meaning except in relation to something else? Do the grades from all schools measure the same thing? Does the 85 give any indication of the variation in the student's achievement? Is the grade the best of which the student was capable? Does the grade tell anything about his capacity to grow intellectually? What a wonderful anesthetic action a numerical grade has on an internship committee! The problem, of course, is recognized and some of the attempts that are being made to solve it by the use of achievement evaluation methods were described to us at the Teaching Institute.

More Examinations?

Frequently, we hear it stated that one of the objectives of examinations is to stimulate a student to learn. With this there is no quarrel. But the argument is extended—if one examination is an incentive to learning then many examinations must be a still better incentive. "Give 'em an examination every week—keep 'em on their toes," shout the professors. And the students join in the cry, "Give us more examinations. We like 'em. We won't be as tense." I wonder! *Does* the frequent application of the whiplash of examinations achieve its ends? Are we selling our teachers' birthright of inculcating in the student an understanding of scholarly attainments for the sweetened porridge of the drillmaster? Is the removal of the spur of insecurity about final grades, in order to make the student and the teacher secure in their progress, a legitimate aim of education? May not the very instrument we use be magnified to such dimensions that it is no longer efficient? Have we merely produced in the minds of the students a state of Brownian motion?

I, myself, believe that the examination may be a very important learning exercise. And if I evaluate the reports of the Teaching Institute correctly, this belief is shared by many. The examination doubtless serves a useful purpose in forcing the student to correlate in his own mind the different facets of his education. This is what Cardinal Newman more than 100 years ago called "a digestion of what we receive, into the substance of our previous state of thought." But for this to take place, it is necessary that the examination be properly designed. The examination may also bring into focus, for both student and teacher, the weakness as well as the strength of their intellectual achievement. And in this respect, too, the examination promotes learning.

But there is still another way in which examinations may serve as a learning aid. This is by providing us with the chance to test our ability to think under adverse conditions. To think, if you like, under the tensions, anxieties and pressures that are engendered by an examination. Is not this, after all, a characteristic of a physician's life? Naturally, the examination must be carefully constructed and the conditions must not be so absolutely adverse as to frustrate. But is there any reason why we should not turn this factor of the adversity of examinations to the student's advantage? Such a use of examinations also requires that we employ a number of examining techniques in order to test the student's

reaction under a variety of conditions —the oral examination, the objective, the essay examination. In this way we may well obtain a much better picture of the wholeness of the student's knowledge than with any single test, and *mirabile dictu*—we may come to some measure of agreement about which type of examination to use. We need them all.

Now that I have come to the end of this report I hope that I have conveyed to you an impression of the distinctive quality of the Teaching Institute. It provided a chance for all of us to dust our brains and I know that Osler must have been looking down at us from the heights of Olympus and that my friend Alexander Pope, who was sitting next to him, must have remarked:

"Faith, Gospel, all seem'd made
to be disputed
And none had sense enough to
be confuted."

Remarks on the Department of Psychiatry

WILLIAM T. LHAMON

THESE BRIEF REFLECTIONS on psychiatric teaching and on the conduct of a university department of psychiatry are made in the interval between the laying down of responsibilities at the University of Pennsylvania and the assumption of new responsibilities at Baylor University. Certain factors in Philadelphia and at the university stand out in clear relief at this moment of departure. Because of the interest we have in the social matrix of education, and because the social milieu is of general interest in an examination of a scholarly process, I shall enumerate briefly.

In this setting there is a tradition of humanism and a concern for history. The climate of influential opinion is congenial to scholarship. The past is respected and a continuity of feeling with respect to education extends back to colonial days. This humanism, these traditions, these feelings for scholarly things and the intellectual climate are all of overriding importance for our work and the department. Contrary to what might be supposed these conditions favor innovation and discovery. Traditions do not necessarily constrain the scholar. Edward Sapir in his beautiful prose pointed out that "the subtlest and most decisive cultural influences of personality, the most fruitful revolts, are discernible in those environments that have long and uninterruptedly supported a richly streaming culture. So far from being suffocated in an atmosphere of endless precedent, the creative spirit gains sustenance and vigor for its own unfolding, and, if it is strong enough, it may swing free of that very atmosphere with a poise hardly dreamed of by the timid iconoclasts of unformed cultures."

Thus, the social matrix and the intellectual climate can and do represent very great although intangible factors in which we here in this venerable institution should rejoice. In this rich and varied social matrix, with its invaluable assets, the university department of psychiatry exists and grows. Where does it stand? The interval between positions presently enjoyed by myself may give a possibility of seeing more clearly and a freedom to make remarks in a manner not otherwise available. It seems an appropriate time to gather together ideas and impressions.

To return to the question, the department of psychiatry in many respects stands well. There is a richness and variety of activity and responsibility. There is a busy center of service to the hospital and the community. A considerable number of professors of psychiatry have gone forth from

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the department during the past decade or two attesting to the distinction and influence of the departmental leaders, particularly Professors Bond, Strecker and Appel. We have seen the development of a teaching clinic in the university hospital. Our fellows enjoy their instruction and say they profit from it. We personally have had great satisfaction from this. Several students have become active in fields of investigation; we value greatly our participation in their development. Medical students are each year better prepared in working with the psychodynamic problems of patients. All of us must take satisfaction from these facts which reflect credit on the whole department.

Better Communication

In other respects the department might well examine its position. There is a diffuse character of the departmental faculty. Perhaps this is desirable on the grounds that we remain flexible and not rigidly fixed to any special course of action. On the other hand it seems evident that in the executive roles we have not accomplished adequate communication and perhaps not sufficiently established policy and a sense of direction. The department in this sense could benefit from more cohesion and increased clarification of departmental goals and direction. A departmental *laissez faire* of excessive degree suggests greater attention should be paid to these matters. William James said that every man is ready to become passionate in defense of some cause and it is only necessary to select a good cause. We need to become passionate in behalf of some cause in our teaching; it is too easy to become complacent. Complacency may be a natural companion to tolerance but I see no logical reason why this must be so. We suggest that our passion be directed towards the *new*, the *unknown* and the *frontiers* of our field.

Whitehead has pointed out that a university worth its salt must infuse romance and imagination into knowledge. A zestful attitude towards the unknown must be shared by the faculty with the students. Those members of our faculty with the gift of stimulating the curiosity of students about what is not known must be fostered and given every opportunity. The demands of practice and the humanitarian need to help can nullify this most important requirement. A faculty of a university is obliged to produce knowledge as well as to distribute it, and the human problems of people should not be allowed to erase completely the search for truth.

We need more questioning and perhaps more doubting in the faculty. I hold that a primary function of a faculty member is to instill doubt. This constitutes a recommendation for skepticism. Skepticism is a state of mind particularly needed, it seems to me, in that wing of the biological sciences which approaches the social sciences. The great jurist, Learned Hand, felt that if we are to be saved it must be through skepticism and gave as the key to his philosophy the words of Oliver Cromwell before the battle of Dunbar, as follows: "I beseech ye in the bowels of Christ, think that ye may be mistaken."

The teaching of psychiatry to medical students has been considered very recently by a distinguished group of medical teachers, and their report appeared as the proceedings of the 1951 Ithaca conference on psychiatry and medical education sponsored by the Association of American Medical Colleges and the American Psychiatric Association. The association recently formulated a good set of aims for un-

dergraduate medical education (*Journ. Med. Edu.* 28:57-59, March 1953). Among other items this formulation stressed that advanced details of a specialty are not proper subjects for undergraduate teaching. A broad coverage of medical information with attempts to give the student ways and means of acquiring further knowledge was suggested.

Too Little Dissent

In my opinion this suggestion regarding breadth of instruction applies particularly to us who teach psychiatry. Sometimes I feel we narrow our topic and give too much information and allow too little dissent. The words of Cromwell apply here. Despite the undoubted fact that one of the most significant developments in psychiatry in this century has been the evolution of an hedonic motivational psychology as developed by Freud and his colleagues, we almost certainly have not arrived at a final position. The answers are not all in. No impressive proof other than that stemming from authority and personal conviction is available to show that our greater understanding in this area has lessened the problem of mental disease. The engrossing study of psychodynamics has produced nothing comparable to the effects of antisyphilitic therapy in paresis, or to the use of nicotinic acid in pellagra, or perhaps to the use of electricity in depression.

No doubt this comment will be seen by some as representing a point of view a little to the right of McKinley. Nevertheless, I fear, as I listen to plans and review our current teaching of medical students, that we are not opening enough pathways for those who must follow us. Those who follow us must find some road leading to more effective methods of dealing with vast areas of psychiatric disease. We do not know if the answers will be found in chemistry, sociology, psychology, psychoanalysis, physics or some other discipline. Milton says in the Areopagitica, "Truth is compared in Scriptures to a streaming fountain; if her waters flow not in a perpetual progression they sicken into a muddy pool of conformity and tradition."

If we accept the need for direction and for enthusiastic curiosity, for doubting and for skepticism, for general coverage and the broad approach, there still remains the necessity for selecting the content of our course. To have a rigid commitment to postpone presentation is to be paralyzed by inactivity. Some selection must be made. I suggest the following six overall categories: personality, human ecology, interrelations of behavior with physiology, chemistry, systematic psychiatry and treatment and research.

The first category, that of personality, includes the major part of current content insofar as it includes psychodynamics. We teach personality development and the modern analytic concepts of human motivation under this heading. In general, we do not bring in sufficiently the knowledge of perception, memory and learning that has been gained in experimental psychology. Our presentation of personality is too narrowly focused on motivation, despite our statements to the effect that a proper presentation of psychodynamics includes the ego functions of perception, thinking, etc. Basic psychological facts need to be given to students, who in general are poorly prepared in this area before medical school.

Human ecology represents the study of the organism's reaction to and with the human and nonhuman environ-

ment. The focus here is on the interpersonal field rather than on the intrapersonal field. The social matrix of health and disease and the interaction of culture and social institutions with the organism should be taught. Attention should be given to communication and language patterns and to the new field of quantitative group dynamics. In general, this aspect of medicine and psychiatry meets with resistance from students and faculty. The nature of resistance to social medicine needs study; careful exploration of this increasingly important field should be attempted with students.

If a massive sudden improvement in our ability to treat mental disease comes, it quite probably will be in the interrelations of physics, chemistry or physiology with behavior. A possible break-through in one of these basic sciences with respect to mental disease is so overwhelmingly important (as in the case of paresis and pellagra) that each student should be given a good opportunity to be aware of the latest developments. Correlation with other departments is most desirable here in order that unnecessary duplication be avoided. Some knowledge of work in these basic sciences should be held by the faculty of psychiatry. Too often the interrelations of psychiatry and physiology are presented in terms of a physiology of several decades earlier.

Descriptions of syndromes and disease entities in mental disease are currently unpopular subjects. One is tempted to regard all such material as merely the permutations and combination of a few basic conflicts. Students, however, need to have an acquaintance with our categories of psychopathology, and frequently are most interested in the classification of diseases. Because we need to foster student interest, because it is not at all certain that the traditional categories of mental disease are outmoded, because of the advantages inherent in a systematic presentation, we should continue to present systematic and standard psychiatric syndromes.

Clearly students must be given an opportunity to learn current methods of treating mental disease. This should include, whenever possible, the actual working with patients under supervision over a period of time sufficient for them to sense change in a patient's condition. It is important to include in this experience an opportunity to see and work with patients in mental hospitals, general hospitals and outpatient clinics. The tendency to avoid full consideration of the psychotic patient in public institutions is unrealistic. Half of the hospitalized patients in this nation are committed to public mental institutions under the care of physicians. Medical students need to be familiar with these institutions and the care available in them.

Research should be emphasized in our teaching of psychiatry. There has been a lack of attention to this phase of a university's obligation resulting from difficulties of support, competition of better paying clinical activities and the complexity of research in the social sciences. There is much unfamiliar methodology to be learned in the fields of research design and analysis, appropriate to the social sciences, which should be given to students. Perhaps an association with a research activity in the department should in some degree be obligatory for the students. Perhaps the departments of psychiatry, public health and pediatrics could give combined instruction on research methodology appropriate to the common social science aspects of their disciplines. In any case a good deal of work must be done to raise the level of instruction in this area of our teaching.

How To Deal with the Important Needs for Service

G. LYMAN DUFF

THE TERM "SERVICE," in the context of the title that has been assigned to me, refers to those functions that are performed by teaching departments for hospitals in connection with the diagnosis and treatment of disease. These functions are undoubtedly important to the hospital and its patients, and often to the teaching departments as well, but there is the ever-present danger that service functions may interfere to a more or less serious degree with teaching and research which ought to be the first and most important concerns of every department of a university school of medicine.

During the four days of the Teaching Institute the problem of how to keep service functions under control was touched upon from various angles by different discussion groups, but it was tackled head on (at my request) only by the group with which I sat. I am indebted to the other members of the group for many of the ideas that I shall try to pass on.

The area of discussion can be reduced somewhat at the outset by certain exclusions. There has not yet been established a sufficiently uniform pattern in the teaching of medical genetics nor in the other occupations of its teachers to permit the emergence of many common problems. So far as I am aware, genetics has no service problem in the sense that I have defined it and, hence, this field will be omitted from further discussion. Moreover, substantial numbers of departments of microbiology have no responsibility to provide service to any hospital. Among the departments of microbiology that responded to the questionnaire sent out prior to the Teaching Institute, less than half provide service in bacteriology or serology.

The microbiologists brought out in discussion two points that set their service problems in a totally different light from those of the pathologists. First, the specimens coming from hospital patients to departments of microbiology are not essential, and some thought not very useful, in their teaching programs. Second, if a department of microbiology must provide service in that field for hospital purposes, the diagnostic laboratory work can be carried on by well-trained technicians with a minimum of supervision on the part of the professional staff of the department. The

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duties in this regard are not very time-consuming. The reports that identify bacterial organisms, or that deal with their sensitivity to antibiotics, or that give the results of serological tests are all *factual* reports. There is no interpretive aspect to them. It is only when reports are based on *interpretation* that the time of highly skilled and experienced members of the staff of a teaching department is consumed and this is the situation in every department of pathology that is required to provide hospital service. It can be said, therefore, that the problem I have to discuss lies mainly in departments of pathology, but the remedies that I shall propose for pathology are equally applicable to microbiology if problems of a similar character should arise in that field.

Department Services

Among the departments of pathology that responded to the Institute questionnaire, more than 80 per cent have service responsibilities for autopsies and surgical pathology, nearly two-thirds of all these departments conduct a service in exfoliative cytology and about 40 per cent of all departments have responsibility for one or several aspects of clinical pathology including microbiology, serology, clinical chemistry, hematology and blood bank. The reports arising from microbiology, serology and clinical chemistry are factual and hence these branches use up relatively little staff time unless consultative services are required as well, but some of the reports arising in hematology and all of those that are expected from an autopsy service or a service in surgical pathology are based on skilled interpretation. These are the areas in which the time of the experienced professional staff of the department is likely to be consumed in unreasonable proportions. Moreover, the routine service load in many cases must be rather massive. The average number of autopsies per annum reported by the departments that conduct an autopsy service was 836, the average number of surgical specimens was 12,926 in a year, and the annual average of specimens in exfoliative cytology numbered 6,507. These figures represent an annual output of skilled interpretation that is quite staggering. Even more interesting is the fact that nearly half of the material represented in these figures came from "outside institutions," by which I understand hospitals other than the most closely located teaching hospital with which the department probably has a natural and, indeed, almost unavoidable relationship.

It can be argued that a department of pathology does not need to conduct routine services of any kind for the benefit of its teaching program, and I am quite sure that a first-rate teaching and research department can be maintained without an intramural autopsy service or service in surgical pathology. I know of several first-class departments in which this is true. But any department that has not these services under its own control must have sure and ready access to autopsy and surgical material somewhere close at hand, for such material is essential to a well-rounded program of teaching. In my own opinion, and I know that there are many teachers of pathology who would agree with me, a university department of pathology is not fully equipped with all the facilities for teaching if it does not possess an autopsy service and a service in surgical pathology. Whether or not it should also provide service in clinical pathology will depend

very largely on local conditions; the paramount consideration is whether or not the department of pathology is called upon to teach clinical pathology.

Fewer Responsibilities

However, the material that is required for teaching in the field of pathological anatomy can very well be provided by 300 to 600 autopsies and 3,000 to 6,000 surgical specimens a year. These requirements can easily be met by one general hospital of moderate size. The only "outside institutions" that a teaching department should serve are those that can provide autopsy material representing diseases not ordinarily encountered in general hospitals such as acute infectious diseases and pulmonary tuberculosis. On the other hand, it is quite apparent from the figures quoted above that many departments are reaching out for, or becoming saddled with, the responsibility for autopsies and surgical pathology in hospitals outside their proper orbit and in a volume that far exceeds what is necessary. Insofar as this kind of service to "outside institutions" imposes a burden on the teaching staff, it is not only a useless appendage to the department but a positively harmful one. It is a sort of tail that is very prone to become hypertrophied and before long the hypertrophied tail is sure to begin to wag the dog. The proper treatment is to cut off the tail.

After a successful amputation has been accomplished, and even in those cases where no tail ever existed to require such a drastic operation, there still remains a problem in the department of pathology that conducts an autopsy and biopsy service within its own confines. These services, even when they handle a volume of work no larger than is necessary for teaching purposes, have a way of absorbing more staff manpower than one would believe possible, and for this reason they may interfere seriously with teaching and even more with research. Psychological reasons provide at least a partial explanation. Service functions that relate to living patients seem to have great urgency about them, and this feeling extends even to patients who are no longer living. The feeling in both cases is frequently reinforced by urgent inquiries from members of the clinical staff of the hospital who want to know the answers immediately, if not sooner. Moreover, the problems posed by an autopsy or an unusual surgical specimen are often fascinating. Most pathologists like to wrestle with such problems from time to time. Pathologists, by and large, are very conscientious people and, once a pathologist has attacked such a problem, he will usually give the best interpretation of which he is capable, no matter what the expenditure of time. In any event, it is true that service functions are time-consuming and it is also true that the pathologists themselves will often underestimate the number of staff members required to carry on an autopsy service and a service in surgical pathology in the superlative fashion that is appropriate in a teaching department of pathology.

What, then, are the remedies? I have already recommended that the tail should be cut off if one exists. The objection may be made that the members of the teaching staff in pathology are then deprived of income that they badly need. To this objection I can only reply that their salaries should be set at a level sufficiently high to obviate the necessity of supplementation from any "out-

side" source. As to the management of the service functions within the department that are useful for teaching purposes, an attempt should be made to arrange that the volume of work should be no larger than necessary. Perhaps even more important is to be sure, whatever may be the size of the services, that a really adequate number of staff members is provided to operate these services effectively. In order to make certain that the service functions do not poach on the time that is supposedly free for teaching and research, it is well to have a definite schedule for the allocation of duties and responsibilities. By this I imply that while a staff member is assigned to a service, that should be his first, and in some circumstances, his only duty. Similarly, those who are engaged in teaching and research should have only a strictly limited service responsibility during that period or no service responsibility at all.

By a system of rotation every member of the department can have his turn in teaching and research on the one hand and service functions on the other. Furthermore, the periods of rotation can be adjusted to suit the preference of individual staff members who may wish to spend more or less time in teaching and research or on pathological anatomy in its service aspects. Senior members of the staff should learn to delegate responsibility to the more junior members.

This will conserve the valuable time of the senior man and at the same time will promote the development of the junior. If these simple principles are followed, I believe that it is possible to provide the hospital services that are legitimate in a teaching department of pathology without interfering with the teaching program and without jeopardizing the section's research potentialities.

These suggestions are made rather dogmatically with a view primarily to the interests of undergraduate teaching and the prosecution of research by members of the teaching staff. It is recognized, of course, that teaching departments may operate more or less extensive programs of graduate training in pathology. When a department has a considerable number of young pathologists-in-training, many of whom are aiming to prepare themselves for hospital laboratory work, it is obvious that the limited hospital services that are carried on within the department itself may not suffice for this purpose, and the pathological laboratories of other teaching or nonteaching hospitals in the neighborhood may have to be utilized in the training scheme. However, this provides no reason for the teaching department to saddle itself or the members of its regular intramural staff with any responsibility for the operation of the laboratories in these other hospitals. Each hospital should have its own director of laboratories who might be appointed a part-time member of the teaching staff and who might enter more or less actively into the undergraduate teaching program, depending on his desires and aptitude as a teacher and on the need for his services. On the other hand, young pathologists-in-training can be seconded as assistants to the pathologists of these "outside institutions" for suitable periods of time in rotation in order to round out their training and experience. Control of the laboratories of such "outside institutions" and the accompanying load of responsibility are not by any means necessary for the operation of such a training scheme. A modicum of diplomacy and a reasonable degree of good will among the parties concerned are the only essential prerequisites.

The Newborn Service in the Pediatric Teaching Program

HERMAN M. JAHR AND DOROTHY I. SMITH

THE ALMOST IMPERCEPTIBLE improvement in mortality rates of infants during the first two or three days of life in the light of our remarkable progress in infant care over the past 50 years has been attributable to many factors. Some of these are obviously beyond control insofar as our present knowledge is concerned, although constant addition to our understanding of cause and effect operating during the intrauterine life of the fetus justifies a favorable outlook in the years ahead. Good obstetrical care prenatally and a thorough respect for the mechanics of labor are now recognized as principal factors in preventing mortality and lessening morbidity of the mother and infant alike. One of our greatest needs today in the field is a better orientation on the part of the general practitioner to the understanding of the physiology and physiopathology of the newly born infant. To bring this about, medical schools will have to improve the instruction in the art and science of newborn care not only on postgraduate level, but during the years of medical student clerkships.

It is our opinion that over the years the newborn service has been the proverbial stepchild of the undergraduate medical curriculum. In many teaching institutions even today the nursery remains a part of the obstetric service with the resident or intern in charge. Unless the infant presents symptoms of an acute nature, he receives little attention beyond the usual routine. In centers where the nursery is under pediatric supervision, the service fares not much better. As a general rule, if it is under any staff direction at all, the nursery is usually assigned to one of the younger men who, often as not, has had little experience and probably less interest than the assignment requires for an effective program.

Teaching medical students newborn care in this country has been limited to lectures during the sophomore or junior years. The only time a student has any contact with the nursery is during the senior year on his externship, and in some centers an undergraduate sees a newborn infant only in the delivery room during his obstetrical service. With this type of basic training (or rather lack of training) compared with the modern, thorough indoctrination in other departments the student receives in his junior and senior years, is it any wonder that many infants are taken

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home from the hospital without a single physical examination?

Dire Predictions

The neglect of the nursery from the teaching point of view has been attributed largely to the fear of possible infections of the young infants from too much handling. "You can't let medical students run in and out of the nursery without catastrophe," several obstetricians and pediatricians told us at different times when asked why teaching newborn care on a par with other subjects is not being done.

In 1952, we undertook a careful test of those dire predictions. With the enlargement of our nursery we felt it would be comparatively safe to assign junior clerks to the nursery as a part of their pediatric service. These were divided into groups of four with rigid instructions as to their conduct and observation of careful technique in handling the infants. Eighty-four students went through the service without a single untoward incident. One of the authors was in the nursery constantly during the period in which the students did their work, examining babies, feeding, and diapering them. Each student was assigned from four to six infants during a two-week period of service.

In 1953, the service was extended to include premature infants. Again, there was not a single adverse experience during the entire academic year traceable to our teaching program. The only extra precaution we exercise is not to admit any student with symptoms of upper respiratory infection. Colds which occasionally were seen in an infant were almost invariably traced to someone of the regular nursery personnel.

The program for the junior student on the newborn service begins with a thorough orientation to the nursery. This is carried out by our nursing supervisor in charge of obstetrics and newborn. Instruction begins as the students enter the nursery door. They are shown where to hang their coats, wash their hands, where to obtain gown, cap and mask. From there they are taken on a tour of the entire nursery, where all of the various equipment and its uses are explained. Stethoscopes, otoscopes, flashlights, etc. are provided in the nursery, and the student is not allowed to bring any of his own instruments. The supervisor explains how the nursery charting is done, and she demonstrates with an actual chart where all of the information, such as number of stools, wet diapers, feedings and any information as to respirations, cyanosis, etc. are recorded.

The instructor then takes over. The students are taken as a group to examine a baby. As each part of the physical examination is gone over, we point out what to look for in a newborn infant and discuss the variations of the normal which we see daily. When this group examination is completed, each student is assigned a baby. The staff member remains in the nursery to assist and answer questions the student may have concerning the infant he is examining.

Progress Notes

With each infant the student is assigned, he is required to keep daily progress notes. He notes the number and color of stools, the amount of individual feedings, any vomiting or regurgitation and weight loss or gain. Any unusual occurrences such as apnea, cyanosis, (peripheral or generalized), convulsions or tremors are also noted and evaluated.

Since many of our babies in the nursery are bottle-fed, each student has at least one or two formula-fed babies. On these infants he calculates the required fluid and calorie intake per day. He also calculates the total calorie needs and records the amounts ingested over the 24-hour period. He is required to do a physical examination and keep a record on the infant. At the end of the service he presents the record to and is quizzed by the instructor on any phase of newborn care.

All premature infants are assigned to the students the same as the full-term infants and a record similar to that mentioned for the full-term infants is kept on the prematures. Premature care is discussed in detail on nursery rounds. These rounds are held twice a week with the physician in charge conducting the group. In addition to routine premature care, problems of emergency care of the newborn, congenital anomalies, infections, vomiting, intracranial hemorrhage and jaundice including erythroblastosis are gone over thoroughly. Many students have expressed amazement that there are so many things to keep in mind when caring for a newborn infant. It is our hope that we will be sending out graduates with the attitude that a nursery and its occupants need close supervision not only from house officers but equally important from practicing physicians.

As a final step in learning to care for newborn infants, the junior student is required to feed at least one baby during his service. Many of the students have willingly fed more than one baby and seemed to enjoy the experience.

The students are as a whole quite impressed and pleased with the newborn service. They have been extremely careful in their technique. Interns in our hospital who were in the first group to have this clerkship, spend more time in the nursery and are more interested in the various problems which arise than interns who had their undergraduate training elsewhere. It was our experience prior to this program that interns considered nursery service as "something that had to be done." Many at that time, of course, were seeing and handling babies for the first time in their medical training and some were actually afraid of the infants. We no longer find this to be true.

We can truly say that our experiment in this phase of medical teaching has been fully successful. We hope that in the near future, the newborn service will be established as a regular teaching service in every medical school in the United States.

Editorials and Comments

"Facts" About Medicine in the U.S.S.R.

THE NATIONAL COUNCIL of American-Soviet Friendship, Inc., distributed, under a covering letter dated February 10, 1953, a 21-page release under the lead title, "American Soviet Facts," with the subtitle, "Health and Medical Care in the U.S.S.R."

It opens with the following paragraph: "The principle that the health of all the people is the responsibility of government was established in the early days of the Soviet Union. Hospitalization, including consultations with specialists, use of the operating room and operations, anaesthetics, blood transfusions, use of oxygen tent or iron lung, doctor's calls to the home, visits to the doctor's office or clinic, all treatment, dental care, nursing, periodical and thorough [hic] check ups, are FREE [paid by the taxpayer]."

It proceeds then to describe in the most glowing terms how every individual in the far-flung U.S.S.R. is provided with the best of modern medical care.

Among the statements we are asked to accept as "facts" are the following:

"There are now 75 medical institutions graduating 25,000 doctors annually. [Vurashov in the August 28, 1954, issue of the *British Medical Journal* stated that of these 75 institutions only 63 were medical, four were dental and eight were pharmaceutical.]

"There is one physician for every 700 persons and one doctor's assistant for every 450.

"There are now 300,000 doctors and 900,000 medical workers in the U.S.S.R. [Vurashov stated that in 1917 there were only about 20,000 physicians in all Russia.]

"In places where there are no hospitals or where workers are employed in remote areas, medical service is brought to the job by train, plane, boat or car. Timber workers in the great northern forests are followed by a special hospital train with doctors, nurses, x-ray, laboratory and operating facilities. A similarly equipped hospital ship follows loggers up the rivers.

"In every town and city there are ambulance stations and it is claimed that within 10 minutes after a call is received an ambulance, with doctor and nurse, will be on the way.

"Medical service by air has long been routine in the U.S.S.R. Specially equipped planes are always on call to bring specialists, drugs and surgeons to remote farms or mountain villages or to bring patients to hospitals. If it is not possible for the plane to land, the health worker uses a parachute. Health planes are equipped with x-ray and laboratory facilities. They are used not only for emergencies but fly to the most remote regions

for the periodic health examinations which are given to all the people in the Soviet Union."

Dr. Alexander Savitski is quoted as stating that "65 per cent of all malignant tumors are cured in the Russian republic. Preventive examination of the population has resulted in the 'total elimination' of breast and uterine cancer in certain areas.

"*Syphillis* [hic]: No new cases of this disease have been reported for several years.

"*Narcotics:* There are no cases reported of drug addiction.

"Infant mortality has dropped to 1 per cent. The death rate for the U.S.S.R. as a whole is now one of the lowest in the world, 8.9 a thousand."

Let us hope that the people of the U.S.S.R. are in fact obtaining medical service of a high order. The National Council of American-Soviet Friendship, Inc., and its chairman, Dr. John A. Kingsbury, would, however, do well to advise their executive director, Richard Morford, that press releases stretching the credulity of the reader as this one stretches it, will hinder more than help the common understanding between the people of the U. S. and U.S.S.R.—D.F.S.

Cleveland Conference on Rehabilitation Teaching

A RECENT CONFERENCE of medical schools in Cleveland touched off such widespread and enthusiastic response that participants at the meeting, reflecting upon its significance, report having experienced there a genuine ferment of progress—a ferment that augurs well for the future of the nation's handicapped.

This sense of involvement in medical progress was stimulated by the concerted efforts of 12 medical schools, aided by grants from the National Foundation for Infantile Paralysis, to search for new and effective approaches to rehabilitation teaching.

Last February representatives of these 12 institutions met together in Cleveland, under the auspices of the National Foundation, for two days of discussions devoted to pooling ideas and experiences accumulated since inception of this unique pilot study in medical teaching in 1953.

As might have been expected, the interim progress reports at Cleveland revealed great individuality of approach attributable to differences in size, type of administration whether voluntary or public, location and stage of development of the various services and facilities essential to rehabilitation both in the medical school and the community.

Among the problems the conferees agreed were most difficult of solution are these: 1. How to teach the concept of rehabilitation to the faculty. 2. How to break down the resistance of the physician to discussing problems and planning for the needs of his patients with associate medical personnel who can be of assistance. 3. How and where to find in shortage categories trained team personnel such as specially trained physicians, physical therapists, occupational therapists, medical social workers, nurses with the understanding and the specific techniques which are needed, vocational counselors and others. 4. How to use community resources for teaching purposes.

Despite these problems, or perhaps because of them, the ferment represented at Cleveland bespoke evidence of a major ongoing operation. For here was revealed one of the significant aspects of medical education in this country; the striving, in broadly scattered geographic areas and through widely different methodologies, to achieve a common destination for the common good.

With both the sponsor and those actively engaged in the study, we can agree that it presages well for the future of the disabled. For if we can imbue every doctor who graduates from our medical schools with the conviction that the proper emphasis in rehabilitation should focus upon the treatment of the patient *with* a disease or injury, rather than upon treatment of the disease or injury *of* the patient, the continuing care of our people will be greatly furthered.—K.W. and M.C.P.

Acids and Bases

THE TERM "OXYGEN" was introduced by Lavoisier because it means "acid former." It was soon discovered that metal oxides were basic in water solution. About 60 years ago, Arrhemus made a marvelous scientific contribution by introducing his theory of ionization.

Observations were made which showed that animals on vegetable diets, rich in the alkali metals (principally K), excreted alkaline urine. On the other hand, high protein diets, rich in S&P, resulted in acid urine. Unfortunately, as a result of these and other earlier ideas and observations, the term "base" was given to metal ion (cation) such as Na^{+}, K^{+}, Ca^{++}, etc.; the anions were called "acids."

After these terms were used in biochemistry texts, Brönsted introduced the theory which considers acids as proton (H-ion) donors, and bases as proton acceptors. This theory is now very widely accepted and it works very well for water solutions.

Rakestraw[1] has pointed out that the old classical terminology for acids and bases is quite in reverse of our more modern ideas. Brönsted's concept has been commended[2, 3, 4] as an excellent tool for explaining many biological processes. It clearly shows there is a direct correlation between acids, bases and pH.

The 1955 edition of West and Todd[5] now applies the Brönsted theory. This venture by these two excellent teachers of biochemistry is a most important step forward in the field of medical education. However, there will always be confusion and lack of understanding as long as some of us continue to use the old classical terms which refer to anions as acids and cations as bases. Such terms should be taught as history. Today's medical students are the victims of confusion and misunderstanding. We teachers of medicine are under obligation to do all we can to help the student of medicine gain as much knowledge and understanding as is possible in the shortest possible time. This cannot be done until we do away with the confusion in the use of the term "acids and bases." A complete change-over to the more modern approach would be an important step forward as suggested in the articles listed under references.

Perhaps local and national discussions on this subject would be very helpful in bringing about a better understanding of "acids and bases." Interdepartmental seminars on the subject would also be a great contribution.—A.W.D.

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3. Devor, A. W., *Proc. S. Dakota Acad. Sci.; 28*, 34-42, 1949.
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An Important Announcement

THE FOLLOWING MEMORANDUM has been issued by Dr. Paul C. Barton, executive secretary of the Health Resources Advisory Committee:

"The Selective Service Law, during World War II and again since 1948, has placed upon most medical and dental students an obligation for military service. As a general policy, deferment of this military service has been granted until completion of medical or dental education. On the other hand, the operation of this law has made it virtually impossible for a medical or dental student with a potential interest in a teaching or research career in a basic science department to obtain deferment for training or service in such a field. The result has been an almost complete absence of recruits for these important fields of medical and dental education for the next generation or longer.

"Because of the increasing seriousness of this situation, the Health Resources Advisory Committee took up the matter with the national headquarters of selective service. The committee was informed that the authority to defer medical and dental students for graduate training or essential service in a basic science field is in the hands of the individual's local selective service board. This fact is of great importance to you. To obtain deferment of such individuals, the student concerned should request deferment for such purposes with the full support of the dean of the school. The request should, of course, be addressed to the local selective service board of the individual concerned. Such requests (which should be only for occasional individuals of exceptional promise as teachers or investigators) might be made at any time, but it would seem most appropriate at the end of the sophomore year or in lieu of an internship upon completion of the basic medical or dental course."

This is a matter which has been too long ignored. It is to be hoped that deans and department heads will act promptly in asking deferment for promising young students looking forward to a career in teaching and research in the basic sciences. Local selective service boards should be easily convinced of the necessity of maintaining the supply of basic science teachers.—D.F.S.

Training for an Academic Career

THE GRADUATE SCHOOL of Medicine of the University of Pennsylvania will offer, beginning with this fall of 1955, a program of training teachers and investigators in the fields of neurology and ophthalmology. The new courses will be the first of their kind in this country and are unique in that they will be designed for neurologists and ophthalmologists who have decided to enter or continue a full-time academic career in teaching and research, and they will have as their chief aims improving teaching ability, providing a good scientific background for medical research, and providing advanced training in the specialty.

Though this new program is made possible by a grant from the National Institute of Neurological Disease and Blindness and is primarily for those in the clinical specialties in neurology and ophthalmology, the director of the program, Dr. Julius H. Comroe Jr., has expressed hope that in the first group of trainees would be found at least one or two from the fields of internal medicine or surgery.

This program would appear to be an important step forward in the effort to provide special training for young clinicians with a real interest in an academic career. It would be very unfortunate if lack of dissemination of information about the program should result in failure to fill the eight or ten places available. For more complete information about the courses the reader is referred to the announcement carried in the News Digest section of this issue.—D.F.S.

NEWS DIGEST

SAMA Convention

More than 1,500 medical students attended the Fifth Annual Convention of the Student American Medical Association May 5-8 at the Hotel Sherman, Chicago. The delegates represented 18,000 medical students from all over the United States.

Featured at the convention was an exhibit of 50 different booths dealing with various technical and scientific developments. An exhibit on medical education was displayed by the Council on Medical Education and Hospitals of the American Medical Association. This booth graphically showed some of the council's functions, such as the accreditation of medical and technical schools. A slide film series illustrated the council's internship and residency training program.

Elected to the presidency of SAMA for 1955-6 was John Belt, University of Oregon Medical School. Serving with him will be Hugh Follmer, University of Nebraska College of Medicine, as vice-president, and Harry Wilson, University of Maryland School of Medicine, as treasurer.

A highlight of the convention was the SAMA's first annual banquet, at which Dr. You Chan Yang, Korean ambassador to the United States, spoke on "Diplomacy and Medicine."

THE AMA COUNCIL on Medical Education and Hospitals exhibited the above display at The Fifth Annual SAMA Convention held at the Hotel Sherman, Chicago, recently.

Fellowships in Aviation Medicine

Two new fellowships, one in aviation medicine and one in aviation psychology, are now available for graduate students through funds granted by the Link Foundation, a trust to advance training and education in aeronautics.

Ohio State University will administer the fellowship in aviation medicine, and Tufts College will administer the fellowship in aviation psychology.

Preventive Medicine Conference

Latin America's 75 medical schools will be invited to attend seminars on the teaching of preventive medicine, sponsored by the Pan American Sanitary Bureau of the Regional Office of the World Health Organization.

The bureau is organizing the seminars at the request of Latin American medical and school authorities, who have indicated their interest in improving and strengthening the teaching of preventive medicine in their countries. The seminars will be organized into small workshop groups, and there will be no presentation of formal papers.

In addition to its regular staff, the bureau has appointed two special consultants to work on the seminars. They are Dr. Abraham Horwitz, subdirector of the National Health Service of Chile and director-on-leave of the school of public health at the University of Chile; and Dr. Guillermo Arbona, professor and head of the department of preventive medicine, University of San Juan, Puerto Rico.

The first of two seminars will be held in August 1955, and will include deans and professors from Argentina, Bolivia, Brazil, Chile, Paraguay, Peru, Uruguay and Venezuela. Early in 1956, a second seminar will be held for representatives from Colombia, Cuba, Dominican Republic, Equador, El Salvador, Guatamala, Haiti, Honduras, Mexico, Nicaragua and Panama.

Army Course on Atomic Casualties

A 10-day course on "Medical Care of Atomic Casualties" has recently been established by the Army Service Graduate School at the Walter Reed Medical Center in Washington, D. C. The course is open to military medical officers and civilian physicians interested in the medical aspects of civil defense preparation.

The course reviews briefly the development of the atom and hydrogen bombs, with discussion of the total casualties to be anticipated in these types of explosions. Reports will be included from the various medical specialties as they relate to treatment.

Advanced Study for Neurologists

A two-year graduate course for teachers and investigators in neurology, the first of its kind in the country, will begin this fall at the University of Pennsylvania Graduate School of Medicine. The course is made possible by a special grant from the National Institute of Neurological Diseases and Blindness.

The program will be directed by Dr. Julius Comroe Jr., professor of physiology and pharmacology, and is designed for neurologists who have decided to enter or continue a full-time academic career in teaching and research. Prospective candidates must either be certified by the American Board of Neurology or have most of the requirements for board certification.

In addition to providing advanced training in the neurological sciences, the course is designed to furnish its students with the tools for advanced

medical research. Special seminars on medical writing and library utilization will be included.

The program will emphasize a variety of teaching techniques such as the lecture, the conference, the seminar and the ward round approach. Visual aids will be demonstrated. Practice teaching will begin early in the course, and each member of the group will have his lectures recorded to help evaluate progress. There will be special seminars on medical administration.

Participating in the courses will be authorities in various fields from universities outside the Philadelphia area, as well as local specialists.

New ICS Executive Director

Vice Adm. Ross T. McIntire, M.D. (USN, Retired), has been appointed executive director of the International College of Surgeons.

Admiral McIntire served as surgeon general of the Navy from 1938 to 1946, and was awarded the Distinguished Service Medal for outstanding service during World War II. Following his retirement from the Navy, he served as director of the Red Cross National Blood Program and chairman of the President's Committee on National "Employ the Physically Handicapped" Week.

Medical Center Established

Formation of a new medical center has just been announced by New York Medical College, Flower-Fifth Avenue hospital. The new center will be known as New York Medical College-Metropolitan Medical Center, and will include four hospitals with a total of 4,368 beds.

Resident physicians attached to the new center will rotate through the various hospitals. Visiting staff will be appointed to the center and hold appointments at all hospitals. Directors of departments at the college will also serve as directors of departments at the center.

In addition to Flower-Fifth Avenue, the center will include the new Metropolitan hospital, old Metropolitan hospital, and Bird S. Coler hospital. These hospitals, although staffed by New York Medical College, were formerly administered as separate institutions.

At the same time, the college announced a fund-raising campaign to finance a new $1,000,000 building, as the first step in a 10-year expansion and development program.

Heart Model Teaching Aid

A new life-size model of the normal heart is now available for use as a teaching aid, and can be purchased from the American Heart Association or local affiliates.

The model was designed by Leon Schlossberg, medical illustrator at Johns Hopkins hospital, and is intended for use in medical schools, nursing schools and graduate courses for physicians. Cast in latex and lucite, the model reveals the internal structure of the heart, as well as its external configuration.

$15 Million for Mental Research

Departments of psychiatry in medical schools and their related hospitals will participate in a new $15 million research program in mental health established by trustees of the Ford Foundation. The grant will extend over a period of 5-10 years.

The research will be directed toward determining the cause of mental illness and developing and testing effective methods of treatment and prevention. Later in the program, provision has been made for the development and training of qualified research personnel.

Qualified institutions may now make applications for research in the

following areas: social and community aspects of mental health, children's disorders, personality development and functioning, studies in therapy and biological, physiological and somatic problems in mental illness.

"Ars Medica" Exhibit

A collection of *Ars Medica* through the ages is currently touring the nation's medical schools and hospitals. The exhibit consists of 85 pieces of medical art, including works by Rembrandt, Daumier, Vesalius, Hogarth, Eakins, Bellini, Homer and Toulouse-Lautrec. Many of the prints are medical illustrations once used for teaching purposes.

"CARNOT ILL" by Toulouse-Lautrec

The exhibit was assembled from the collection of the Philadelphia Museum of Art by Carl Zigrosser, curator of prints. It was made possible by a grant from Smith, Kline and French Laboratories. Fifteen mobile units will carry the show from city to city. Currently, the exhibit has been on display at the Georgetown University School of Medicine, sponsored by the school's Audio-visual Committee.

New Deputy Surgeon General

The Department of the Army has announced the appointment of Brig. Gen. James P. Cooney, M.D. as deputy surgeon general of the Army. He succeeds Maj. Gen. Silas B. Hays, M.D., who became surgeon general of the Army on June 1, 1955.

Schering Award Winners

Winners of the 1954 Schering Awards for papers by medical students have been announced. First prize winners, who received $500 each, are: Billy Franklin Andrews, Duke University School of Medicine, for "Prophylactic and Therapeutic Uses of Parenteral Antihistamines;" Richard Ellis Land, Northwestern University Medical School, for "Modern Treatment of Infections and Allergic Disorders of the Eye;" and Marvin Jerome Friedenberg, Tufts College Medical School, for "Androgen Therapy in the Female."

Entry forms for the tenth annual Schering Award competition, now under way, are due on July 1. The purpose of the award is to encourage medical writing and the exploration of current research by medical students.

Videclinic on Mental Illness

On May 9, physicians in 34 cities attended a televised clinical conference on new weapons against mental illness. The American Medical Association and the American Psychiatric Association jointly presented this "Videclinic," which was produced and sponsored by Smith, Kline and French Laboratories.

Entitled "The Mind and Medicine," the closed-circuit telecast first outlined the scope of the mental illness problem, and then traced some of the advances that have been made in methods of treatment. Particular em-

phasis was placed on the use and discovery of new drugs and their effects.

The videclinic then dealt with different techniques in psychotherapy, such as the "open ward" group discussion approach, the "therapeutic communities" with no fences or locked doors and the "boarding-house" arrangement where families take the mentally ill into their own homes. Actual films of these experimental projects in England and Belgium were shown.

"Mind and Medicine" is the second videclinic for physicians, and was presented during the nationwide observance of Mental Health Week.

Cancer Society Awards

Three New York City medical schools will share in research grants-in-aid recently awarded by the American Cancer Society. They are Columbia University, $83,422, Cornell University, $10,000, and New York University, $26,222.

Besides the $2,270,210 awarded for research, the Society has set aside $2,863,417 for institutional grants and $430,000 for fellowships.

College Briefs

Albany

Approximately $10,000 worth of equipment for experimenting with specialized chemical determinations and procedures will be purchased for the Thomas Ordway Memorial laboratory. The funds have come from friends and relatives of the former dean of the college, and will be administered by Dr. RICHARD T. BEEBE, chairman of the department of medicine, who will be in charge of the research. Researchers at the new laboratory will be seeking new methods of testing biological samples for increased accuracy and ease in the diagnosis and treatment of diseases of various kinds.

Dr. ROBERT S. ALEXANDER has been appointed chairman of the department of physiology, succeeding Dr. HAROLD C. WIGGERS, who was appointed dean of the college in 1953, and who has been serving in the double capacity until the present time. Dr. Alexander is associate professor of physiology at the Medical College of Georgia.

Boston

Dr. HENRY M. LEMON has been awarded an $11,341 grant-in-aid by the American Cancer Society, to continue his research on steroid control over growth and reproduction. This is the society's fifth award to Dr. Lemon, who is engaged in research on treatments for cancer when it progresses beyond surgical aid.

Bowman Gray

Dr. MARTIN GEORGE NETSKY has joined the faculty as professor of neuropathology and associate professor of neurology. He has been associated with the College of Physicians and Surgeons of Columbia University since 1949.

Dr. ISADORE MESCHAN, formerly professor of radiology at the University of Arkansas Medical Center, has been appointed professor of radiology, effective August 1.

Cincinnati

Dr. WILLIAM A. ALTEMEIER, director of the department of surgery, has

been invited to serve as visiting professor of surgery at Yale University School of Medicine. Dr. Altemeier is currently directing a research program at the college of medicine for the National Research Council on the prevention and control of various forms of shock and infection resulting from atomic attacks.

Cornell

Dr. WALSH MCDERMOTT, associate professor of medicine, has been appointed to the Livingston Farrand chair of public health and preventive medicine, succeeding Dr. WILSON G. SMILLIE, who is retiring as head of the department of public health and preventive medicine. Dr. McDermott has been directing the New York Hospital-Cornell Medical Center anti-tuberculosis program among the Navajo Indians. His new appointment is effective July 1.

Duke

A newly organized Council on Gerontology will draw upon 15 departments in a university-wide program of study and research on the problems of the aged.

The council will conduct seminars, guest lectures, conferences and institutes as part of the program. Dr. EWALD W. BUSSE, chairman of the department of psychiatry, will serve as chairman of the council.

Albert Einstein

More than $7 million has been donated to the college of medicine, which will admit its first class in September. A $10 million building program has been in process and construction of the new school is now nearly complete. One hundred-seventy faculty posts have already been filled.

Hahnemann

The Atomic Energy Commission has awarded $11,124 to Dr. JAY S. ROTH, assistant professor of biochemistry, for a study of the effects of radiation and biochemical activities of microsomes.

Harvard

Dr. ALFRED H. STANTON, formerly of Boston University School of Medicine, has been appointed associate professor of psychiatry. He has also been named psychiatrist-in-chief of McLean hospital, one of the teaching hospitals associated with the medical school. Dr. Stanton's work will contribute to the cooperative program of investigations being conducted by the department of social relations.

The department of ophthalmology has announced the appointment of Dr. DAVID G. COGAN as professor and Dr. WALTER M. GRANT as associate professor. They will both continue teaching at Howe Laboratory, Massachusetts Eye and Ear Infirmary.

Dr. WYLAND F. LEADBETTER has been named associate clinical professor of surgery and chief of the urological service at Massachusetts General hospital. Dr. Leadbetter is also surgeon and chief of urology at Mt. Auburn hospital and attending urologist at the West Roxbury Veterans Administration hospital. He was formerly professor of urology at Tufts College Medical School.

The retirement of Dr. KARL SPENCER LASHLEY as research professor of neuropsychology has been announced, just 20 years after his appointment to the faculty in 1935. Since 1942, Dr. Lashley has been director of the Yerkes Laboratories of Primate Biology at Orange Park, Fla., a research center jointly sponsored by Harvard and Yale Universities.

Howard

Dr. ROBERT S. JASON has been appointed dean, succeeding Dr. JOSEPH L. JOHNSON, who is retiring. Dr. Jason was formerly assistant dean. Dr. Johnson will remain at the school as professor of physiology.

Illinois

Dr. ISAAC SCHOUR has been named dean of the college of dentistry, succeeding Dr. ALLAN G. BRODIE, who is retiring. Dr. Brodie will continue as professor and head of the depart-

ment of orthodontics. Dr. Schour is also professor and head of the department of oral histology and associate dean in charge of postgraduate studies.

A fund of $35,000 for expanding the Quine Library of Medical Science has been approved and remodeling will begin this month. The additional rooms will provide more work space for the library's acquisition department, receiving room for new books, periodical reserves, as well as circulation, cataloging and binding departments. About 200 sections of stack shelving will be added, making room for 20,000 more books.

Dr. WILLARD OWEN THOMPSON, clinical professor of medicine since 1945, died on April 3. Dr. Thompson served as associate professor of medicine from 1941 to 1943, and as professor of medicine from 1943 to 1945.

A grant of $12,500 has been awarded to Dr. DANELY P. SLAUGHTER, department of surgery, for research on cancer training. This was one of seven grants totalling $27,377 awarded the university by the Public Health Service.

Meharry

Dr. P. F. HAHN, director of the Meharry Cancer Research laboratories, is one of six Americans invited to participate in a symposium on the physiopathology of the reticuloendothelial system to be held in Paris on July 6-8.

The symposium is being sponsored by the *Conseil des Organisations Internationales des Sciences Medicales*, established through UNESCO and the World Health Organization. Papers will be presented by 20 members of the council, from Great Britain, France, the United States, Germany, Switzerland, Belgium and Italy.

Miami

Dr. JAMES H. FERGUSON has been appointed professor and chairman of the department of obstetrics and gynecology, effective June 1. Dr. Ferguson was formerly assistant professor of obstetrics and gynecology at Tulane School of Medicine.

Michigan

Eight medical students recently made public presentations of their scientific papers. This method, a new educational device in the training of undergraduate students, was inaugurated at the first annual Student's Night, at a program in the main amphitheatre of the university hospital.

The research, which was done on various subjects in clinical and experimental medicine, was provided for by a limited number of $500 research grants. The program and the public presentation of papers are intended to provide organized clinical research training for the undergraduates. The grants were from the National Foundation for Infantile Paralysis, the Michigan Memorial-Phoenix Project, the Difco Laboratories, Lederle Pharmaceutical Company and the University of Michigan Undergraduate Medical Research Fellowships.

Minnesota

Four prepared dental seminar kits are now available from the dental school for area dentists. Each kit contains a file of from 40 to 50 photographic slides, a table-top slide viewer, a long-playing record of a lecture on latest dental techniques, and the text of the lecture. They are sent express-collect for a loan charge of $5 plus transportation.

Subject of the first four kits are introduction to oral cancer, the role of calculus in periodontal disease, modified long-cone dental roentgenography and the use of oral surgical instruments.

Dr. FLETCHER A. MILLER, a research associate in physiology and surgery, has won the second Charles O. Finley research scholarship granted by the American College of Surgeons. The grant is in the amount of $20,000 over a three-year period. Dr. Miller is particularly interested in the problems of cardiac arrest.

N.Y.U.-Bellevue

Dr. DONAL SHEEHAN, acting director of the Bellevue Medical Center, has been named dean of the college of medicine and the postgraduate medical school, and director of the medical center, effective July 1.

He will assume the duties now shared by Dr. CURRIER MCEWEN, dean of the medical college, who will return at his own request to teaching, and Dr. ROBERT BOGGS, dean of the postgraduate medical school, who has resigned.

Dr. Sheehan joined the medical college in 1937 as professor of anatomy and director of the anatomical laboratories. He was acting dean of the college from 1943 to 1945 and has been director of the medical center since 1951.

Among those chosen for the two-month Walker-Ames visiting professorships at the University of Washington was Dr. HOMER W. SMITH, professor and chairman of the department of physiology at the college of medicine. Dr. Smith was at the university as visiting professor of physiology.

State U. of N.Y.

Dr. LOUIS M. HELLMAN, professor of obstetrics and gynecology, has been named chairman of a new human embryology and development study section of the National Institutes of Health. This section was established to provide investigative funds in human reproduction problems, such as infertility, pregnancy and labor, congenital malformations and the newborn, especially the premature.

Dr. MARIANNA R. BOVARNICK, of the department of medicine, has received $19,513 from the National Institutes of Health for a renewal of her study of growth and metabolism of rickettsiae and other intracellular parasites.

The National Institutes of Health also awarded Dr. CLARENCE DENNIS of the department of surgery $20,259 for work on the development of a pump-oxygenator to supplant the heart and lungs.

Dr. Dennis also received $17,600 from the Life Insurance Medical Research Fund for work on definitive repair of intracardiac congenital anomalies under direct vision.

Northwestern

A $45,000 grant has been received by the university's school of speech for the establishment of an institute for language disorders in children. HELMER R. MYKLEBUST, professor of audiology, will direct the institute. He has been director of the children's hearing and aphasia clinic since 1950.

The institute will constitute a service for handicapped children, as well as a laboratory and training facility for studies in speech pathology and audiology.

Ohio

Dr. CHARLES DOAN, dean of the medical school, was recently elected president of the newly-organized Society for Research on the Reticulo-Endothelial System.

Oregon

A grant of $15,000 for one year with automatic renewal for two additional years was awarded to the biochemistry department. The award was a renewal of an earlier contract by the Atomic Energy Commission to Dr. John T. VanBruggen, associate professor of biochemistry, for studies in fat metabolism. Some of the funds will be available for the partial support of four medical students who also are working toward a master's degree in biochemistry.

Pittsburgh

A $25,000 chair of preventive medicine was awarded to the university medical school by the Commonwealth of Pennsylvania, in honor of Dr. Jonas E. Salk, developer of the Salk anti-poliomyelitis vaccine. Dr. Salk will be the first professor to hold the new post, which will be known as the Commonwealth chair of preventive medicine. Dr. Salk has been associated with the university since 1947.

Pennsylvania

Studies of the pharmacology of nicotine and related alkaloids will be made by Dr. CARL C. GRUHZIT, associate in physiology and pharmacology in the graduate school of medicine, with the aid of a $13,915 grant from the Tobacco Industry Research Committee.

Rochester

Dr. GEORGE HOYT WHIPPLE, Nobel Prize winner in medicine, dean of the school of medicine for 32 years and professor of pathology, will retire on June 30, after 50 years service in medical education.

Dr. Whipple joined the faculty as dean in 1921, four years before the school opened in 1925. He was awarded the Nobel Prize in 1934, jointly with the late Dr. GEORGE F. MINOT and Dr. WILLIAM P. MURPHY, for their work on pernicious anemia.

As an outgrowth of Dr. Whipple's research on anemia, the university has been able to set up three new endowment funds, made possible by the payments by the Eli Lilly Company over a period of 30 years for work in the pathology laboratory in the study and standardization of secondary anemia liver extracts. One fund of $250,000 has been established to endow a chair in pathology, to be known as the George Hoyt Whipple professorship. A second fund of $300,000 has been created for scholarships, which will be called the Katharine W. Whipple Scholarships in honor of Dr. Whipple's wife. The third fund, for $75,000 will endow visiting lectureships in honor of the first three emeritus professors of the medical school, Dr. WALTER R. BLOOR, Dr. JOHN R. MURLIN and Dr. SAMUEL W. CLAUSEN.

South Carolina

The Department of Public Health, Education and Welfare has announced research grants totalling $43,137 for the medical college.

The new medical college hospital was dedicated on May 10, with Gov. GEORGE BELL TIMMERMAN Jr., of South Carolina, as the dedication speaker.

Dr. HERMAN G. WEISKOTTEN, chairman of the American Medical Association's Council on Medical Education and Hospitals, spoke as the invited representative of medical education.

Southern California

Medical school students have pledged over $250,000 in support of the construction of a $1,500,000 basic science building which is being planned as part of the effort to consolidate the medical campus. The proposed gifts, which averaged almost $1,000 per student, are to be donated over a period ending after three years of medical practice.

Plans for the five-story building have been announced by the school of medicine. It will be the first unit of an estimated $5 million project, and will be erected on a 10-acre site near the Los Angeles County hospital. The structure will house laboratories and classrooms for biochemistry, physiology, pharmacology, pathology, microbiology and anatomy.

Tennessee

Two persons affiliated with the university will assist the University of Indonesia in the reorganization of its medical college. Dr. ALFRED P. KRAUS, assistant director of the department of medical laboratories of the college of medicine, and his wife Lorraine, a graduate student in the division of chemistry, will become faculty members at the Indonesian school.

Dr. Kraus, who leaves July 1, will become visiting assistant professor of hematology. Mrs. Kraus will become visiting instructor in biochemistry. She will leave in September.

Dr. T. P. NASH Jr., who joined the staff of the university in 1915, is retiring as chief of the division of chemistry to devote full time to his duties as dean of the school of biological sciences. His successor as chief of the division will be Dr. JOHN L.

Wood, who joined the staff in 1946 as associate professor and was later promoted to professor and head of the department of biochemistry. The changes are effective July 1.

Since January 1, the section of clinical pathology of the department of medical laboratories in the division of medicine has received notification of research grants totalling $107,402. Two of the grants are from the Atomic Energy Commission and deal with physiological alterations in the monkeys subjected to whole body radiation and with mechanisms of ionic imbalance in patho-physiologic states. Two grants are from the Public Health Service and deal with alterations in central hemodynamics and sodium and potassium metabolism in artificial fever and with the effects of diuretic agents on hemodynamics and transcapillary transfer rates of Na and K. A fifth grant from the American Heart Association is for studies of potassium metabolism in animals whose total body K has been acutely reduced by use of the artificial kidney. Dr. R. R. Overman and Dr. George Barlow are the investigators responsible for these projects.

Utah

Dr. Philip B. Price, professor and chairman of the department of surgery, has been appointed acting dean of the college of medicine. He will fill the post left vacant by Dr. John Z. Bowers who will become dean of the University of Wisconsin Medical School. Dr. Price has been professor and head of the surgery department since 1943.

Audiovisual News

New Films Added to MAVI Library

The April issue of the Journal of MEDICAL EDUCATION (Vol. 30, No. 4, pp. 239-245) announced the films that were available at that time. New additions include four short films from the University of Rochester department of radiology; three short films produced by the Communicable Disease Center; nine films of the Mental Symptoms series produced by the National Film Board of Canada; four short case record films from Guy's Hospital Medical School, London; a report film from the department of anatomy, University of Oklahoma School of Medicine; and a technique film from the department of microbiology and public health, Chicago Medical School.

Ancylostoma Caninum in the Intestine of the Dog.....$3

5 min., sd., b&w., 16 mm., 1954.

Depicts blood-sucking activities and copulation of adult hookworm in the intestine of the dog. Shows living hookworms attached to the intestinal mucosa; individual worms ingesting blood and eliminating it from their posterior end; the considerable blood loss due to the feeding of even a single worm and feeding on blood continuing while the male and female are in copula.

Producers: Communicable Disease Center, United States Public Health Service.

Bacillus of Calmette-Guerin.....$4

21 min., si., color, 16 mm., 1947.

Shows in some detail the methods of cultivation of BCG for production of the BCG vaccine.

Author: Irwin S. Neiman, M.D., department of microbiology and public health, Chicago Medical School.

A Case of Athetoid Infantile Cerebral Palsy with Quick Movements.....$3

2½ min., si., color, 16 mm., 1952.

Demonstrates rapid athetoid movement in a four-year-old child with infantile cerebral palsy. (A printed leaflet with the clinical history of the case is included with the film.)

Producers: Department of Medical Illustration, Guy's Hospital Medical School, London; *Medical Adviser:* R. C. MacKeith D.M.; *Photography:* C. E. Engel.

A Case of Hypotonia and Purposeless Movements.....$3

2½ min., si., color, 16 mm., 1951.

Illustrates abnormal movements seen in mentally defective children. The case shown is a girl of five years. Sequences of a normal six-months-old baby are included for comparison. (Printed clinical history of the case is included with the film.)

Producers: Department of Medical Illustration, Guy's Hospital Medical School, London; *Medical Advisers:* P. R. Evans M.D. and R. C. MacKeith, D. M.; *Photography:* C. E. Engel.

A Case of Reflex (Sonogenic) Epilepsy $3

2 min., si., b&w., 16 mm., 1953.

Shows a 4¾ year-old boy with reflex epilepsy. (Printed clinical history included with the film.)

Producers: Department of Medical Illustration, Guy's Hospital Medical School, London; *Medical Adviser:* R. C. MacKeith D.M.; *Photography:* C. E. Engel.

A Cinematographic Record on Human Peripheral Blood Leucocytes.....$4

25 min., si., b&w., 16 mm., 1954.

A normal action film showing the elaboration, maturation and extrusion phases of the excretary cycle (approximately 1 hour) in living neutrophiles, eosinophiles and monocytes of human blood.

Author-Producer: Kenneth M. Richter, Ph.D., professor of histology and embryology, department of anatomy, University of Oklahoma School of Medicine.

Cinefluorographic Studies in Angiocardiography $3

13 min., si., b&w., 16 mm., 1953.

Cineangiocardiograms of Tetralogy of Fallot, Eisenmenger's complex, dilated pulmonary artery, pulmonary stenosis, tricuspid atresia and other congenital cardiac anomalies.

Author-Producers: department of radiology, University of Rochester School of Medicine and Dentistry.

Demonstration of X-ray Findings in the Normal Pharynx.....$3

13 min., si., b&w., 16 mm., 1953.

Fluoroscopic appearance of normal pharynx in swallowing, showing action of tongue, soft palate and pharyngeal constrictors. Indentations and bulges of pharyngeal barium column are shown as described by Templeton. Valsalva maneuver is demonstrated in both views, emphasizing location of cricopharyngeus muscle and pyriform sinuses.

Author-Producers: department of radiology, University of Rochester School of Medicine and Dentistry.

Embryology of Human Behavior.....$7

28 min., sd., color, 16 mm., 1950.

Traces the development of behavior patterns in the human infant, demonstrating how in normal growth predictable behavior patterns can be studied in progressive sequence. The maturation of eye-hand coordination is chosen as the behavior complex for age-by-age and step-by-step film observation. The laws of normal growth are applied to deviate and deficient children, and the principles of developmental diagnosis illustrated. (A companion book, "Infant Behavior" by Arnold Gesell, M.D., is available from Harper & Harper, 49 East 33rd St., New York 16.)

Producers: Medical Audio-Visual Institute of the Association of American Medical Colleges in cooperation with the Bureau of Medicine and Surgery and Office of Naval Research, Department of the Navy. This film is based upon the work of Arnold Gesell, M.D., and associates, Yale University.

Each additional film booked with any order rents at a rate of $2 less than the stated charge.

Erythrocytic Stages of Plasmodium Vivax $2

4 min., sd., b&w., 16 mm., 1954.

Depicts the appearance and behavior of living malaria parasites within infected red blood cells. Shows by means of the phase contrast microscope ring stages, young and mature trophozoites and schizonts of plasmodium vivax.

Producers: Communicable Diseases Center, and Laboratory of Tropical Diseases of the Public Health Service.

The Fight: Science Against Cancer.....$5

23 min., sd., b&w., 16 mm., 1950.

Within the story framework of a patient suffering from skin cancer of the face, who arrives at a hospital clinic for assistance, a voyage of exploration is taken into the microscopic world of the living cell, where the secrets of cancer are being attacked through studies of tissue cultures, genetic factors and biochemical processes. The patient is treated by irradiation, and is cured to become the living symbol of hope and progress in cancer research.

Sponsors: Department of National Health and Welfare, Ottawa, Canada and the National Cancer Institute of the Public Health Service, Federal Security Agency; *Producers:* The National Film Board of Canada and the Medical Audio-Visual Institute of the Association of American Medical Colleges.

Infantile Cerebellar Disorder.....$3

2½ min., si., color, 16 mm., 1950.

Shows the physical appearance of a four-year-old boy with a pronounced coarse tremor of the whole body, but no nystagmus. (Printed clinical history included with film.)

Producers: Department of Medical Illustration, Guy's Hospital Medical School, London; *Medical Advisers:* P. R. Evans M. D. and R. C. MacKeith D.M.; *Photography:* C. E. Engel.

Infective Larvae of Ancylostoma Caninum $3

4 min., sd., b&w., 16 mm., 1954.

Depicts the form of infective larvae of the dog hookworm and their behavior on soil particles. This motion picture shows the migration upward from be-

neath the surface of the soil of large numbers of infective hookworm larvae; the vertical position assumed by larvae on soil particles, either singly or in tufts composed of dozens of worms.

Producers: Communicable Disease Center, Public Health Service.

The Mechanism of Swallowing.....$3

17 min., si., b&w., 16 mm., 1953.

Shows sequence of events in normal swallowing in slow motion with special attention to action of posterior paryngeal pillars, pharyngeal constrictors, epiglottis, cricopharyngeus muscle, soft palate, laryngeal sphincters, and disposal of air trapped in pharynx. Unusual mechanism used in rapid beer drinking is demonstrated.

Producer-Authors: department of radiology, University of Rochester School of Medicine and Dentistry

MENTAL SYMPTOMS (Series)

Sd., b&w., 16 mm., 1951.

This is a series of short films demonstrating, through individual interviews with a psychiatrist, the systematic behavior and verbalization of nine types of psychoses.

Sponsor: Mental Health Division, Department of National Health and Welfare, Canada; *Producer:* National Film Board of Canada (Robert Anderson); *Medical Advisers:* George E. Reed, M.D. and Charles G. Stogdill, M.D. *Case Presentation:* Heinz Lehmann, M.D. *Director:* Stanley Jackson.

Depressive States: I (No. 6) (12 min.)....$4
Depressive States: II (No. 7) (11 min.)..$4
Folie à Deux (No. 9) (14 min.).....$5
Manic State (No. 8) (13 min.).....$5
Organic Reaction-Type:
Senile (No. 5) (10 min.).....$4
Paranoid Conditions (No. 4) (13 min.).....$5
Schizophrenia: Catatonic Type (No. 2) (12 min.).....$4
Schizophrenia: Hebephrenic Type (No. 3) (13 min.).....$5
Schizophrenia: Simple-Type Deteriorated (No. 1) (11 min.).....$4

★ ★ ★

Studies in Diagnostic Cinefluorography $3

17 min., si., b&w., 16 mm., 1950.

Miscellaneous x-ray motion scenes of swallowing, heart and respiration, joint motion and contrast circulation studies.

Author-Producers: department of radiology, University of Rochester School of Medicine and Dentistry.

Western AV Coordinators Meet

The first Western Conference of Medical School Audio-Visual Coordinators was held in Los Angeles on April 18. The conference was attended by representatives from the California medical colleges, the University of Colorado School of Medicine and the University of British Columbia Faculty of Medicine.

Audiovisual materials must further the functions of research, teaching and public relations in the modern medical college or medical center, said Dr. Donald C. Brodie of the University of California in stating the role of AV materials in the medical colleges. The participants warned that an efficient AV service demanded a central facility or AV center with responsibility for all AV services in the college. In addition this central facility must be fully promoted.

A major challenge is that of assisting faculty members to use teaching materials to best advantage. The teacher has sole and final authority on the materials and the way he uses them. However, a good environment in which facilities, materials and professional assistance are available would be of great assistance to individual teachers in the problem of selection, procurement, utilization and evaluation.

The personal and professional qualifications for a school AV director or head were considered as most significant. The desirability of an in-service training program for people who should be assuming wider AV responsibility was expressed.

The success of this conference as well as of the midwest conference last summer indicates that similar conferences in other regions would be of great interest.

Functional Morphology of the Liver

This filmstrip was the first item on the AV preview circuits for medical colleges during the 1954-55 season. The following summary is based on the first 95 appraisal forms

returned by 185 faculty members. The following overall ratings were given to the filmstrip: Excellent, 23; Good, 51; Fair, 17 and Poor, 3.

The majority of appraisers (54) felt that the strip was best suited to provide an integral part of instruction, 29 indicated that it could be best used for review, and 17 indicated that it was best suited for providing an introduction to the study of liver morphology.

The appraisers considered the filmstrip to be suitable to the following audiences, in order of frequency of indication: Medical students, 69; Interns and residents, 30; Postgraduates, 28 and Others, 9.

The stereograms and the photography of them were generally considered excellent, although there was some criticism of the labelling being inadequate. Many indicated that the strip presented material not treated in most present-day textbooks, and one appraiser commented: "This film might very well be loaned to students for detailed study by themselves at home or elsewhere."

The subject matter was generally considered accurate with some exception being taken to the positive or incautious presentation of the "sheet" theory of liver architecture, particularly in the printed commentary.

Fifty-two appraisers thought the filmstrip should be a part of their college library while 20 thought it was a film they should rent from time to time.

Classification Speed-up Needed

Information is accumulating so fast that its communication is being seriously hindered by outmoded systems of classification and cataloging, a professor of education warned at the annual convention of the Department of Audio-Visual Instruction of the National Education Association.

The literature is so voluminous that there is serious delay in its sorting and transmission to the proper recipients, Prof. James D. Finn told the conference of AV people. Electronics must be harnessed to replace much of the slow shuffling and scanning presently employed in seeking references or information.

Librarians commented that the present cost of such equipment is prohibitive. A limited number of large film libraries are using IBM controls for distribution but as yet no large library is employing electronics for indexing and cataloging.

Hematology Slides

Clay-Adams announces a new series of 2″ x 2″ Kodachrome slides illustrating the most common clinical laboratory blood analysis procedures. The slides were made with the cooperation of Dr. Joseph E. Flynn and Dr. Eugene T. Standley, department of pathology, College of Physicians and Surgeons.

Subjects covered in the new series are: capillary blood obtained by finger puncture; collection of venous blood; sedimentation rate and hematocrit; preparation and stain of blood film; reticulocyte stain and count; erythrocyte count; white cell count; platelet count; hemoglobin determination—Sahli method; determination of blood groups and bleeding time determination.

V.A. Film Wins Award

"Fractures of the Femur About the Hip," produced for the Veterans Administration, was the winner of the medical sciences category at the Golden Reel Film Festival held in New York during April. Churchill-Wexler Film Productions was the producer and entrant.

Three other films received recognition of merit certificates: "Ether Analgesia for Cardiac Surgery," entered by E. R. Squibb and Sons; "Hazards of Dental Radiography," entered by the U. S. National Bureau of Standards and "Lung Cancer: The Problem of Early Diagnosis," entered by Audio Productions, Inc. (produced for the American Cancer Society).

The other films, and the entrants, in the category were:

1. "Intravenous Anesthesia with

Barbiturates," Abbott Laboratories.

2. "Post Mortem Tissue Donation," Byron, Inc.

3. "Principles of Respiratory Mechanics (Part I)," Science Pictures, Inc.

4. "Nephrosis in Children," Pfizer Laboratories.

5. "Dental Burs in Action," U. S. National Bureau of Standards.

6. "Technic for Lumbar Sympathetic Ganglionectomy," Sturgis-Grant Productions.

7. "Closed Mouth Impression Technic for Edentulous Patients," Medical College of Virginia.

8. "Immediate Endodontics and Periapical Surgery," University of Washington School of Dentistry.

9. "Local Anesthesia with Cyclaine in Hospital Practice," Audio Productions, Inc.

10. "Hypnodontics or Use of Hypnosis in Dentistry," James D. Jacoby, D.D.S.

11. "Embryology and Pathology of the Intestinal Tract," Graphic Films Corporation.

12. "Duodenal Diverticulum," The Osteopathic Foundation.

13. "Lymphomas and Leukemias," American Cancer Society.

14. "Syphilitic Venereal Disease," E. R. Squibb and Sons.

The Medical Audio-Visual Institute has forwarded full information on the above films to the medical school audiovisual coordinators.

Summaries of Film Reviews

Some Aspects of Accessible Cancer. Part VI—Rectum

24 min., b&w., sd., 16 mm., 1953.

An introduction presents early and later symptoms of rectal cancer. A rectal digital is followed by proctoscopic examination, with biopsy of the presenting lesion; Dx: adenocarcinoma of low malignancy. Surgery is performed at St. Mark's hospital. A two-team, one stage proctosigmoidectomy is shown in most of its principle steps. The pathologist's plotting of the tumor and its metastases is demonstrated on the postoperative specimen. Postoperative care is demonstrated including colostomy care with the aid of a colostomy belt. Follow-up of many postoperative cases is shown. Statistics of St. Mark's and of England and Wales are given in summary.

This film for general practitioners covers the essential points of Dx and Rx of rectal cancer. However, visual emphasis upon the practitioner's role e.g., history, digital examination, proctoscopy and postoperative follow-up, is somewhat overweighted by the long surgical sequences which perhaps should present only the bare high points of the procedure (which, moreover, is not well shown in black-and-white film). The bare "inquisitive finger" will be looked at askance by most American physicians, but the pathologist's study and the colostomy care methods will be seen with interest. The production is skillfully done in the main, although the recording of voices is unsatisfactory in spots, and not always attuned to American ears, while the sharp limitations of black-and-white film are conspicuous in the pathology (endoscopy and operative specimen) and surgery.

For practitioners and medical students the film will provide an adequate introduction or review, subject to comment and discussion by competent teachers of surgery, gastroenterology and oncology. *D.S.R. & A.K., August 1954.*

Audience: General practitioners, medical students, perhaps nurses.

Production Data: Sponsor: British Ministry of Health; **Producer:** Realist Film Unit; **Director:** Jack Elliott; **Associate Producer:** Edgar Anstey; **Photography:** A. E. Jeakins.

Distribution: (In U. S. A.) British Information Services, 30 Rockefeller Plaza, New York 20. **Rental:** $10 per day; **Sale:** $90.

Therapy Influencing the Autonomic Nervous System

18 min., color, sd., 16 mm., 1952.

A lecturer addressing a physician audience lists the disturbances of the autonomic nervous system under the group heading "situational stress." In simple animation the anatomy of the sympathetic system is diagrammed, followed by the anatomy of the parasympathetic system. The lecturer discusses the sites of synaptic release and action of acetylcholine and the sympathins. Autonomic inhibitors, including Pro-Banthine, are listed and discussed. Treatment of situational stress is cov-

is there a doctor in the house?

There certainly is in our house.

Where there is activity against cancer, there is the physician. It is no secret to any of you that the doctor contributes long hours to the needy cancer patient in clinics, in hospitals, in homes. It is your office of which we boast when we say "every doctor's office a cancer detection center."

Less well known is the fact that hundreds of your colleagues, as directors of the American Cancer Society nationally, in Divisions, and with Units, bring the best medical thought to our attack on cancer by education, by research, and by service to patients. The entire professional education program is planned for doctors by doctors.

The occasion for this brief salute is April, the Cancer Control Month. This year, 1955, marks the tenth anniversary of the reorganization of the American Cancer Society and the launching of the post-war attack on cancer. Much has been achieved—far more remains to be done.

We are grateful for your help in the past—and we rely on your continued support. We count heavily on the doctor in our house.

American Cancer Society

ered: psychotherapy, surgery and anticholinergic agents.

This film is a compact verbal review of current knowledge of etiology and management of autonomic nervous system disorders, and consists of a lecturer talking with the aid of some animated blackboard charts. Accurate as far as it goes, newer and promising anticholinergics will of course be discussed by any teacher-user. It is to the real credit of the sponsor that no undue emphasis is given to *Pro-Banthine*. As a film production, the illustrated lecture format is trite and unsatisfactory, and the overall production technology is ordinary.

Concentrated as it is, the film should be used only as a review for medical students, or as a very concentrated refresher message for practitioners. In either situation the essentials and anticholinergic drug therapy will probably be transmitted. (See also "The Autonomic Nervous System" of Markee, reviewed May 1953) *D.S.R. & A.K., August 1954.*

Audience: General practitioners, medical students.

Production Data: Sponsor: G. D. Searle & Co.; **Producer:** The Jam Handy Company, Detroit, Mich. **Distribution:** G. D. Searle & Company, Skokie, Ill., **Loan.**

The Bronchopulmonary Segments (Part I—Anatomy and Bronchoscopy)

31 min., sd., color, 16 mm., 1955.

An introduction indicates the significance of the bronchopulmonary segments in modern medicine. The lung segments are related to the bronchial tree in models and casts, and the embryology of the segments is shown in brief animation. Air inflation and dye injection of bronchi in fresh specimens demonstrate the concept of bronchopulmonary segments which dissection and histology confirm. Using the Jackson-Huber classification, the segments are identified in a model and, in another model, related to the bronchial orifices as seen in bronchoscopy. Bronchoscopy in a patient is shown by motion pictures of the larynx, trachea and bronchi, and identifies each visible segmental orifice in stop motion.

This scientifically accurate, methodically organized and handsomely produced teaching film leaves nothing to be desired in its color, sound, consistent clinical and anatomical orientation and in its clarity of purpose. The models and methods of demonstration are exemplary.

Use of this film is almost mandatory for medical students in anatomy, medicine and surgery of the chest, for internes and residents as "assigned viewing," and for doctors of every kind and specialty in their review of chest diseases. A print should be owned and held for repetitive use in every medical school in the world. Colorful supplemental literature adequately augments the film data. *D.S.R. with K.U.M.C. Panel, April 1955.*

Production Data: Sponsor: Pfizer Laboratories; **Authors:** Chevalier L. Jackson, M.D., John Franklin Huber, M.D. and Charles M. Norris, M.D., Temple University School of Medicine and Hospital, Philadelphia; **Producers:** Campus Film Productions, with Leo L. Leveridge, M.D., Medical Film Department, Pfizer Laboratories. **Distribution:** Film Library, Pfizer Laboratories, Division, Chas. Pfizer and Co., Inc., Brooklyn 6, N. Y., **Loan.**

Book Reviews

Surgery of the Small and Large Intestine

Charles W. Mayo, M.D. The Yearbook Publishers, Inc., Chicago, 1955. 340 pp. with index.

The author states that the purpose of this book is to present precise descriptions and illustrations of the more common surgical procedures performed for lesions of the small and large intestines. He has been aided in his brief descriptions of technique by simple and clear line drawings by the able artist, Russell Drake.

The author has fulfilled his stated intention well. Nevertheless, in obtaining concision, he has necessarily had to omit many of the nuances that are so troublesome at times to some in this field of surgery. This narrows the orbit of usefulness for a volume on this subject to the younger surgeon, or perhaps to the more experienced surgeon who would like to review briefly certain technical procedures from one of our outstanding clinics.

Nathan A. Womack, *North Carolina*

Reproductive System, Vol. II, (Ciba Collection of Medical Illustrations)

Frank H. Netter, M.D. **Ernest Oppenheimer,** M.D., editor. Ciba, Summit, N.J., 1955. 270 pp.

This volume features 233 color plates by Dr. Netter, whose work is familiar to most physicians. Of these plates, 144 have previously appeared in the Ciba Clinical Symposia to promote the sale of pharmaceutical products. This in no way detracts from their value or the excellence of the volume. The text has been written with the collaboration of several well-qualified authors in the fields of urology, obstetrics and gynecology and pathology.

The subject matter covers the normal anatomy of the male and female reproductive systems, and includes chapters on the pathologic anatomy of these systems. There is a chapter on pregnancy and its diseases, as well as one on intersexes.

The illustrations are clear, well-reproduced and sufficiently simple to avoid confusion in the mind of the reader. They will not satisfy the student of anatomy, because they are incomplete in many respects and diagrammatic in nature. This has been done purposely and increases the value of the illustrations for the average student or practicing physician. The illustrations of pathologic anatomy and operative technique are also diagrammatic and clearly illustrate the essential features of the disease or surgical procedure. The text is simply written so as to supplement the points illustrated by the plates, with no attempt to completely cover the subject matter.

This volume may be recommended to students and may be studied with profit by practicing urologists and gynecologists. The excellent color plates and diagrams would serve as a valuable supplement to lectures for medical students.

George J. Bulkley, *Northwestern*

Abdominal Operations, 3rd edition

Rodney Maingot, with 24 contributors. Appleton-Century-Crofts, Inc., New York, 1955. 1568 pp. with index.

For those who have from previous editions discovered the virtues of this comprehensive treatise on abdominal surgery, the present revision will be welcomed as a timely publication. It is apparent that the author and his collaborators have made a painstaking and unusually successful attempt to thoroughly revise this work and bring it up to date. The number of contributing authors has been increased to 24. Eleven new chapters have been added. The subject index has been improved. Illustrations are abundant and of excellent quality.

While entitled "Abdominal Operations," this text is in no sense of the word devoted exclusively to operative technique. While the latter is well-covered, extensive consideration is given to the basic problem of etiology, anatomy, pathology, clinical signs, diagnosis, selection of operation, pre- and postoperative care and prognosis. Basic physiologic considerations in some sec-

tions could be extended to advantage. A new chapter on fluid, electrolyte and nutritional problems helps in overcoming some shortcomings of previous editions.

The author's style of listing references to pertinent articles in the text of the material presented, rather than requiring consideration of footnotes or a bibliography at the end of the chapter, encourages the reader to consult the reference with minimum effort. In only a few areas has this technique been overdone to the point where the connected sequence in reading the text becomes difficult.

This book continues to be one of the most comprehensive and authoritative references on abdominal surgery available. It should be especially helpful to surgical interns and residents as well as practicing general surgeons who wish to review a problem in a relatively short time and have a ready source of reference to the classic and current literature concerned.

James H. Growdon, *Arkansas*

Clinical Psychiatry

W. Mayer Gross, M.D.; **Eliot Slater,** M.D. and **Martin Roth,** M.D. The Williams and Wilkins Co., Baltimore, 1955. 580 pp. with index. $10.

It seems customary that the psychiatrists who place major emphasis on organic factors in mental illness also assume, *ipso facto*, that their point of view is more closely allied and loyal to medicine than the opinions of their colleagues who espouse theories of a cultural or more purely psychological bias. Certainly one cannot challenge the authors' assertions that there has been a tremendous amount of nonscientific writing in the field of psychiatry. Nevertheless one may question their statement that psychiatry is of necessity any more closely related to neurology than to psychology or sociology.

A "multidimensional" framework is offered in which all determinants of psychiatric illness may be included. Great emphasis is placed on genetic and organic determinants. A special emphasis is placed on counteracting the tendency of many psychiatrists to overstress social or psychological determinants. As an authoritative source book of descriptive psychiatry this volume will be invaluable to all physicians. The sections on mental deficiency, schizophrenia and affective disorders are excellent and exhaustive. The chapter on symptomatic psychoses should be of special value to the internist in his frequent encounters with deleria.

More attention is given to the mental picture in neurological diseases than in most texts. Kanner's influence is apparent and acknowledged in the chapter on childhood disorders. There is no section on psychosomatic medicine. Psychotherapy, when recommended, seems to be of a common-sense counseling and educational type.

Individual personality traits are important only insofar as they influence the ultimate clinical picture of a more basic disease process. Consequently no theory of personality development is presented, although hints of a somewhat Pavlovian orientation are seen here and there. While this is a generally fair and objective presentation of varied data from many schools of thought, the authors' repeated allusions to the so-called mystical and mythological fantasies of psychoanalytic theory would hardly merit the designation "objective." However, this is expected as it seems to be their feeling that the wayward wanderers into analytic folklore should be gently but firmly led back to the traditional paths of "objective" medicine and natural science.

While dynamically oriented psychiatrists will feel that their concepts are maltreated, it is felt that this book provides much substantial criticism which should, in spite of the above statements, be read rather than ignored.

Edward H. Knight, *Louisiana*

Peripheral Vascular Disease, 2nd edition

Edgar V. Allen, M.D.; **Nelson W. Barker,** M.D. and **Edgar A. Hines, Jr.,** M.D. W. B. Saunders Co., Philadelphia, 1955. 825 pp.

This is the second edition of a book which is very timely and of widespread interest. Most of the book was written by the authors, but 18 other contributors wrote special chapters. The subject is well-presented and adequately illustrated with 316 pictures. A short biography and statement of the contributors on the subject of 11 outstanding workers in the field of vascular diseases of the past, are given at the beginning of each chapter.

The authors emphasize the clinical aspect of the subject and point out that they have omitted many methods of investigation of the patient because they have discarded these methods in the

routine examination of patients with peripheral vascular disease. They stated that they had employed these methods in the past and had gained valuable information. They also stated that less experienced observers may find such methods of considerable value. The authors have done an excellent job of presenting the subject to the clinician.

James A. Greene, *Baylor*

Shearer's Manual of Human Dissection, 3rd edition

Charles E. Tobin, Ph.D. The Blakiston Division, McGraw-Hill Book Co., Inc., New York, 1955. 287 pp. with index. $6.

As a guide for the freshman medical student, this is an extremely useful book. Clearly and concisely written, it lends itself admirably to the usually abbreviated American course in gross anatomy.

The well-chosen ink-drawn illustrations are sharp and lucid. Adapted from the second edition with no change in length and with many identical pages, the new edition has been brought up-to-date, nevertheless, in areas where research has modified concepts during the past few years.

Notably rewritten are the section on the perineum and the head and neck. Since individual regions are described independently of other areas, the book may be adapted to almost any sequence of dissection. It is a valuable laboratory adjunct to any of the standard atlases and reference texts.

Charles H. Sawyer, *U.C.L.A.*

Medical Students and Medical Science

D. C. Sinclair, M.D. Geoffrey Cumberlege, Oxford University Press, New York, 1955. 149 pp. $5.75.

Professor Sinclair, university demonstrator in human anatomy at Oxford University, visited 12 medical schools in the United States and Canada during 1953. Subsequently he combined his observations from that trip with his knowledge of the British schools to produce this book, which contains a wide variety of information on medical education.

The medical sciences considered are anatomy, biochemistry, physiology, pharmacology, pathology and bacteriology. In the author's words, he "presents a general statement of some of the problems of medical education in America and Britain today" and has "in the main attempted to write what people do and not what they ought to do."

The book is divided into four sections which consider successively, the student, the teaching, the material taught and educational experiments. Similarities and differences between the British and American systems are emphasized throughout. The reader on either side of the Atlantic will recognize the value in a greater exchange of methods and philosophies.

The value of the book is not restricted to teachers in medical schools. Any medical student will profit greatly from a careful perusal of the book; indeed, it would serve admirably as a valuable textbook for an orientation program for medical students. Further, educators in other fields will gain from it a broader perspective on medical education and its problems.

Recognizing the sharp differences that exist between the faculties, students and programs in British and American schools, the reader would profit from an introductory statement regarding the schools that were visited and why they were selected.

The natural sequel to this book is a similar consideration of the programs of the clinical years. It is to be hoped that Professor Sinclair's valuable contribution will instigate other volumes in medical education.

John Z. Bowers, *Utah*

Books and Pamphlets Received

(As space permits, those with the greatest interest to our readers will be reviewed)

Fluoroscopy in Diagnostic Roentgenology

Otto Deutschberger, M.D. W. B. Saunders Co., Philadelphia, 1955. 729 pp. with index.

A Textbook of Physiology, 17th edition

Edited by **John F. Fulton,** M.D. with collaborators. W. B. Saunders Co., Philadelphia, 1955. 1252 pp. with index.

Primary Anatomy, 3rd edition

H. A. Cates and **J. V. Basmajian,** M.D. The Williams & Wilkins Co., Baltimore, 1955. 328 pp. with index. $5.75.

The Physiological Basis of Medical Practice, 6th edition

Charles Herbert Best, M.D. and **Norman Burke Taylor,** M.D. The Williams & Wilkins Co., Baltimore, 1955. 1224 pp.

Surgery of the Small and Large Intestine

Charles W. Mayo, M.D. The Year Book Publishers, Inc., Chicago, 1955. 330 pp. with index. $9.

Ionography

Hugh J. McDonald (with 4 collaborators). Year Book Publishers, Inc., Chicago, 1955. 268 pp. with index and 42 pp. bibliography. $6.50.

1955 Medical Progress

Edited by **Morris Fishbein**, M.D. McGraw-Hill Book Co., Inc., New York, 1955. 346 pp. with index. $5.

Management of Addictions

Edited by **Edward Podolsky**, M.D. Philosophical Library, Inc., New York, 1955. 413 pp.

Pathology

Peter A. Herbut, M. D. Lea & Febiger, Philadelphia, 1955. 1227 pp. with index. $16.

Prolonged and Perplexing Fevers

Chester S. Keefer, M.D. and **Samuel E. Leard**, M.D. Little, Brown & Co., Boston, 1955. 248 pp. with bibliography.

Hypophyseal Growth Hormone, Nature and Actions

Edited by **Richmond W. Smith Jr.**, M.D.; **Oliver H. Gabler**, M.D. and **C. N. H. Long**, M.D. The Blakiston Division, McGraw-Hill Book Co., Inc., New York, 1955. 576 pp. $12.

Bickham-Callander Surgery of the Alimentary Tract, Vols. I, II and III

Revised by **Richard T. Shackelford**, M.D., assisted by **Hammond J. Dugan**, M.D. W. B. Saunders Co., Philadelphia, 1955. 2,575 pp. with index.

Clinical Bacteriology

E. Joan Stokes, M.D., The Williams & Wilkins Co., Baltimore, 1955. 288 pp. with index. $5.

Shearer's Manual of Human Dissection, 3rd edition

Edited by **Charles E. Tobin**, Ph.D. McGraw-Hill Book Co., Inc., New York, 1955. 287 pp. with index. $6.

Hey Groves' Synopsis of Surgery, 14th edition

Edited by **Sir Cecil Wakely**, M.D. The Williams & Wilkins Co., Baltimore, 1954. 651 pp. with index.

Prepayment and the Community

Edited by **Harry Becker**. The Blakiston Division, McGraw-Hill Book Co., New York, 1955. 311 pp. with index. $4.50.

Animal Agents and Vectors of Human Diseases

Ernest Carroll Faust, Ph.D. Lea & Febiger, Philadelphia, 1955. 660 pages. $9.75.

The Physiological Basis of Medical Practice, 6th edition

Charles Herbert Best, M.D. and **Norman Burke Taylor**, M.D. The Williams & Wilkins Co., Baltimore, 1955. 1224 pp.

Abdominal Operations, 3rd edition

Rodney Maingot and contributors. Appleton-Century-Crofts, Inc., New York, 1955. 1568 pp. with index. $24.50.

The Personnel Exchange

Faculty Vacancies

• RESEARCH ASSOCIATES: Postgraduate (M.D or Ph.D.) cardiovascular research and training program, supported by National Heart Institute and American Heart Association offered by departments of physiology and pharmacology, Medical College of Georgia. Stipend for one year program, starting July 1, 1955, is $3400 plus $350 for each dependent. Write Dr. W. F. Hamilton or Dr. R. P. Ahlquist, Medical College of Georgia, Augusta, Ga.

• ANESTHESIOLOGY RESEARCH FELLOWSHIP: Albany Medical College, for July 1, 1955. Training in cardio-pulmonary function laboratory, anesthesia research laboratory and experimental surgery laboratory. Subsidy of $3,000 to $3,600 depending on marital status. Address: J. Gerard Converse, M.D., Professor of Anesthesiology, Albany Medical College, Albany, N. Y., before April 15, 1955.

• ANATOMIST: Teaching duties mainly in microscopic anatomy. Prefer someone whose research interests are in histology or embryology. Salary and rank dependent on experience and qualifications. University Medical School, Pacific West Coast area. Address: V-29.

• M.D.—SCIENTIST: Wanted for staff appointment 1000 bed hospital; age preferably 30 to 40; minimum 2 years clinical experience diagnostic and therapeutic uses of radioisotopes. Excellent opportunity clinical research in academic atmosphere in completely equipped radioisotope research laboratory in medical center large city southwest U. S. Address: P. O. Box 17004, Houston 31, Texas.

• DIRECTOR RADIOISOTOPE UNIT: M.D., certified internist preferred. Splendidly equipped unit for clinical care of patients and research laboratory. Duties include administrative supervision, teaching in residency program, assistance other services in research. General hospital, 1000 beds, affiliated with medical college. Faculty appointment. Address: V-30.

• UNESCO has been asked to suggest candidates for the following posts abroad: Professorships in pathology, international medicine, surgery and ophthalmology (Tabriz, Iran). Professorships in physiology, chemistry, surgical dentistry and dental prosthetics (Baghdad, Iraq). Professorships in anatomy and physiology and lectureships in anatomy, physiology and pharmacology (Jerusalem, Israel). A number of professorships and lectureships in various preclinical subjects (Djakarta, Djocjakarta and others in Indonesia). Address: Enquiries and applications to UNESCO, Exchange of Persons Service, 19 avenue Kléber, Paris 16, France.

• DIRECTOR—MEDICAL EDUCATION: 750 bed nonprofit hospital with Protestant church affiliation desires services of physician with a background in the field of medical education with administrative ability to direct resident and intern program and to key continuing attending staff medical education. Excellent salary opportunity. Address: V-32.

• VIROLOGIST: Full-time faculty position in Eastern medical school department of bacteriology now occupying new laboratories for virus research, including facilities for tissue culture. Teaching of medical and graduate students. Time for research of own choosing. Rank and salary depend on experience and training. Address: V-33.

• FELLOW IN FORENSIC PATHOLOGY: Fully approved; complete facilities for training in pathology, toxicology and administrative legal medicine. Remuneration commensurate with training and experience. Reply: Department of Legal Medicine, Medical College of Virginia, Richmond, Va.

• PHYSIOLOGY: Assistant professor, Dalhousie University, Halifax, Nova Scotia. Salary $4,800. Teaching load not heavy. Ample opportunity for original research. Apply to the dean, faculty of medicine.

• PUBLIC HEALTH PHYSICIAN: New York State Department of Health has opening for a public health physician who has specialized in diagnosis and treatment of tuberculosis, including the interpretation of chest X-ray films. Salary $10,470, with five annual increments to $12,510. Benefits. Qualifications include citizenship, possession of or eligibility for New York State medical license, and four years of specialized tuberculosis experience. Further information from Richard H. Mattox, Director, Office of Personnel Administration, New York State Department of Health, State Office Building, Albany 1, New York.

• DENTAL SURGEON: University of the Witwatersrand, Oral and Dental Hospital and Department of Dentistry, Johannesburg, S. Africa. Senior full-time dental surgeon, lecturer and clinical lecturer in dental prosthetics and dental mechanics. Salary and allowances £1,600 x £50 to £2,100 per annum plus £234 per annum temporary cost-of-living.

To aid in solution of the problem of faculty vacancies, MEDICAL EDUCATION will list persons and positions available, as a free service. The school department or person may have the option of being identified in these columns or of being assigned a key number for each position listed. Mail addressed to key numbers will be forwarded to the person or department listing the request.

Information for these columns should reach the Personnel Exchange, Journal of Medical Education, 185 N. Wabash Ave., Chicago 1, Ill., not later than the 10th of the month which precedes the month in which the listings will appear.

Address: William D. Carter, Head, Exchange of Persons Service, UNESCO, 19 Avenue Kleber, Paris 16, France.

• MYCOLOGIST-BACTERIOLOGIST: Opening for male instructor or assistant professor with Ph.D. or M.D. in department of bacteriology, southern medical school. Prefer individual with training in bacteriology but with primary interest and experience in medical mycology. Time and facilities for research in new laboratories. Address: V-34.

Personnel Available

• PHARMACOLOGIST-PHYSIOLOGIST: 31, veteran. Ph.D. Physiology and pharmacology, M.D. June 1955. Experienced in teaching pharmacology in university medical school. Broad training in classic mammalian pharmacologic techniques and biochemical procedures as they apply to determination of the mode of action of drugs. Desires teaching position with research opportunities. Will accept administrative duties. Publications, references. Address: A-149.

• ANATOMIST: Man, 27, married. Two children. Candidate for Ph.D. Research assistant to prominent histologist for two years on USPHS grant. One year graduate teaching assistantship in gross anatomy. Publications in gross and microscopic. Primary teaching interest in gross. Member AAAS and Sigma Xi. References. Address: A-150.

• MICROBIOLOGIST: Medical, Ph.D. 35. Considerable practical experience in all levels of medical teaching, diagnostic bacteriology, research in antibiotics, tuberculosis and administration. Desire academic or comparable stimulating position with future, in progressive institution. Resume on request. Address: A-151.

• NEUROLOGIST AND PSYCHIATRIST: M.D., Ph.D., 41. Fully qualified in both fields including EEG, long teaching experience, numerous senior hospital appointments. Associate professor for last five years, teaching clinical neurology, neurophysiology (two years), clinical psychiatry, psychotherapy, dynamic and abnormal psychology, psychophysiology. Member many societies U. S. and Great Britain. Desire to concentrate on teaching and clinical work in full time senior capacity. May organize or take full time charge of single or joint department in both specialties in U. S. or Canadian medical school. Address: A-152.

• SURGEON: Board qualified July 1955. University trained. Teaching experience in anatomy, pathology and surgery. Desire full time academic appointment for teaching and research as well as clinical work. Address: A-153.

• HISTOCHEMIST: Man, Ph.D. Eight years experience research in histochemistry, histology, cytology and microscopic technics in well known university and medical school. High scholastic standard, Phi Sigma, Sigma Xi, publications. Desire teaching, research and/or laboratory supervision position in medical school, hospital or liberal arts college. available summer 1955. Address: A-154.

• BIOCHEMIST: 44, Ph.D. Desire two or three year appointment to project looking into problems of extrapulmonary ventilation or administration of volatile and gaseous anaesthetics. Some teaching preferred. Address: A-155.

• THORACIC SURGEON: 37, university-trained and qualified in general and thoracic surgery. Prefer limitation to thoracic and cardiovascular surgery. Experience in cardio-pulmonary physiology. Desire teaching position. Presently on surgical staff of eastern university. Eligible for boards in general and thoracic surgery. Completed Part I Boards in general surgery. Available after August 1. Address: A-156.

• INTERNIST-HEMATOLOGIST: M.D. Presently full-time assistant professor of medicine at large midwestern university hospital. Qualified for American Board of Internal Medicine. Member of Alpha Omega Alpha, American Federation for Clinical Research, American Association for Advancement of Science. Experienced clinician, teacher and investigator. Director of radioisotope laboratory. Numerous scientific publications. Interested in changing location, particularly West Coast, in academic position or private practice with teaching and research opportunities. Address: A-157.

• CHEMIST: Ph.D., minor in biochemistry, male, 10 years of research in medicinal chemistry, large pharmaceutical house. Publications, patents. Desires position in chemical-biochemical research in medical field. Particularly interested in position which would broaden experience by contact with other medical sciences. With or without teaching. Address: A-158.

• PHYSIOLOGIST: Ph.D., male, 30, family. Desires research and/or academic position in eastern part of U.S. Three years experience as research biologist with large eastern pharmaceutical company. Also teaching experience. Address: A-159.

• MICROBIOLOGIST: Medical, male, Ph.D., 37, married. Experience includes public health laboratory, industry (antibiotic research), and teaching all phases of medical microbiology. Present position associate professor microbiology in medical college. Wide research background in antibiotics, immunology, tuber-

culosis, bacterial dissociation. Have some training in use of isotopes. Desires teaching appointment with research opportunities in a medical school located south. Address: A-160.

• MICROBIOLOGIST: Ph.D., 30, presently assistant professor in medical school. Desires position in medical school in teaching and/or research with opportunity to complete work toward M.D. at least part time. Publications, associations, family, honorary societies. Ambition teaching and research in basic science. Address: A-161.

• ENDOCRINOLOGIST—PHYSIOLOGIST—ANATOMIST: with administrative experience desires position in graduate school of arts and sciences or medical school in teaching-research position. Harvard Ph.D.; seven years teaching-research experience, six years at Harvard. Extensive experience in endocrinology, general physiology, histology, medical genetics and zoological sciences. Interested in experimental medicine. Many publications. Membership in Sigma Xi, Kappa Delta Pi, Phi Sigma, N.Y.A.S., A.A.A.S., Amer. Soc. Zool., and others. Will accept administrative responsibilities. Address A-162.

• PHARMACOLOGIST: Ph.D., 26, married, two children. Director of research for established pharmaceutical company and medical student with part-time standing. Original publications, scientific societies, Soc. Experimental Biology and Medicine; American Federation for Clinical Research. Desires academic position with research possibilities while finishing medical school. Address: A-163.

• BACTERIOLOGIST: Male, 38, M.Sc., married. Seven years teaching and research experience in medical bacteriology. Desires part-time position with opportunity to work toward advanced degree. Present total college credit 260 semester hours. Present position an instructor in pathogenic bacteriology in medical school. Address: A-164.

• PUBLIC HEALTH AND PREVENTIVE MEDICINE: M.D. M.P.H. Fellow of the American Public Health Association, age 44, to be discharged from Army tour May 31, 1955. Desires to teach in a department of public health and preventive medicine, in a medical school. Six years experience in the practice of public health with some teaching experience, other experience in psychiatry and general practice. Address: A-165.

• ANESTHESIOLOGIST: 32, married, three children, veteran. Interested in heading a university anesthesia department. Five years experience in internal medicine before entering anesthesiology. Experienced in teaching and research. At the present time completing training at leading university hospital. Available December 1. Address: A-166.

• VIROLOGIST—BACTERIOLOGIST: Male, Ph.D., age 30. Teaching and research experience in medical bacteriology, general microbiology and virology. Tissue culture experience as applied to virology. Desires teaching position with opportunities for research. Address: A-167.

• OBSTETRICIAN-GYNECOLOGIST: Male, married, Board eligible. University teaching experience. Seeking change of location. Prefer full-time permanent academic position with opportunities for clinical investigation. Address: A-168.

• PHYSIOLOGIST: Ph.D., 39, broad biological training. Wide experience in teaching and research. Desires teaching position with opportunity for research. Experience in biometry. Research interest and experience in connective tissue permeability and biological effect of x-rays. Immediately available. Address: A-169.

• PEDIATRICIAN: Female, single. Candidate for M.P.H. Diplomate, American Board of Pediatrics. Interested in child health, teaching and research positions. Available July 1. Address: A-170.

• INTERNIST-CLINICAL PATHOLOGIST: Certified in both specialties, age 44, recently discharged from military service. Extensive research and teaching experience. Listed in coming editions of Am. Men of Science and Blue Book of Awards. Desires permanent ranking academic and/or research position. Will consider directorship of hospital laboratories. Address A-171.

• INTERNIST: Age 31, M.Sc. (Med.), desires full-time administrative or clinical teaching post in a medical school or hospital. Has teaching and research training. Available September 1955. Address: A-172.

• SURGEON: Age 32, veteran, married. University-trained. Diplomate American Board of Surgery. At present instructor in surgery large midwestern university hospital. desire full or part-time academic appointment for teaching and research as well as clinical. Address: A-173.

• PHYSIOLOGIST-ENDOCRINOLOGIST: Ph.D., married, veteran. Eight years teaching experience. Presently assistant professor at medical school. Wishes to relocate on the Pacific Coast or in Canada for health reasons. Member of many professional societies. Publications. Desires teaching position and research opportunities. Available summer 1955. Address: A-174.

• OBSTETRICIAN-GYNECOLOGIST: 45, married. Diplomate of American Board. Now assistant professor in large eastern university college of medicine and full-time director of service in an affiliated medical center. Extensive and varied clinical experience. Teaching experience at both undergraduate and postgraduate levels. Experience in administrative and executive capacities. Several clinical scientific publications. Desires full-time teaching position as department head in a university college of medicine with ample provisions and opportunity for both basic and clinical research. Address: A-175.

• GERMAN PHYSICIAN AND SURGEON: Educated Frankfurt/Main University, now in practice in Frankfurt/Main. Seeks academic position in United States, also information on residencies or internships. Address: A-176.

• RESEARCH ASSOCIATE: in fields of virology, bacteriology or immunology in a medical college. Ph.D. in bacteriology from State University of Iowa. Address: A-177.

• PATHOLOGY-BACTERIOLOGY: Desires teaching and research. Presently director of laboratories and medical examiner in U. S. Overseas Territory (Guam). Research work on tuberculosis and amyotrophic lateral sclerosis. Publications, societies. Ph.D. in microbiology. Teaching experience. Address: A-178.

• ANESTHESIOLOGIST: M.D., Ph.D., bio-chemistry and pharmacology, university trained and experienced. Available and interested in opportunity, preferably East coast, beginning July. Address: A-179.

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Medical college teachers and administrators, and other persons interested in medical education now have the opportunity to become Individual Members of the Association of American Medical Colleges.

Individual Membership means receiving the Journal of Medical Education each month. It means participating in the discussions of the Annual Meeting and receiving the reports of the Teaching Institutes. It means receiving copies of the yearly *Directory*, the *Proceedings* of the Annual Meeting, and other Association publications. And it makes available a valuable, though limited, information service and a personnel exchange service.

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